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RABBITS FOR PROFIT  
AND  
RABBITS FOR POWDER.

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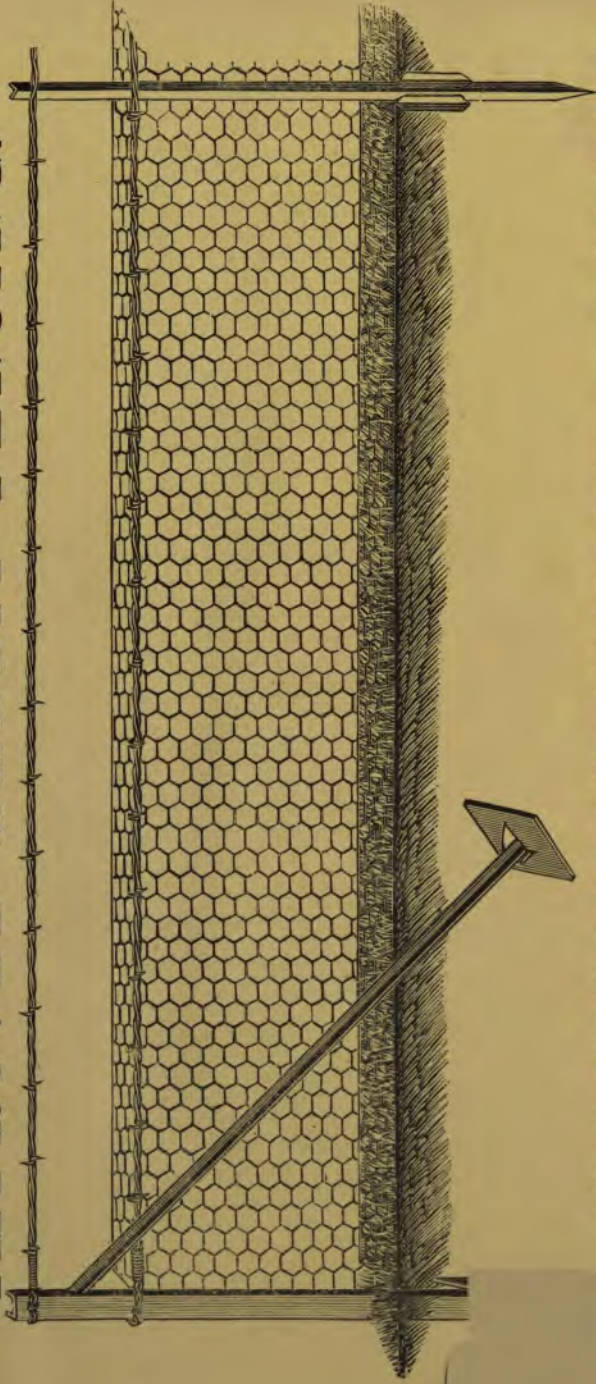


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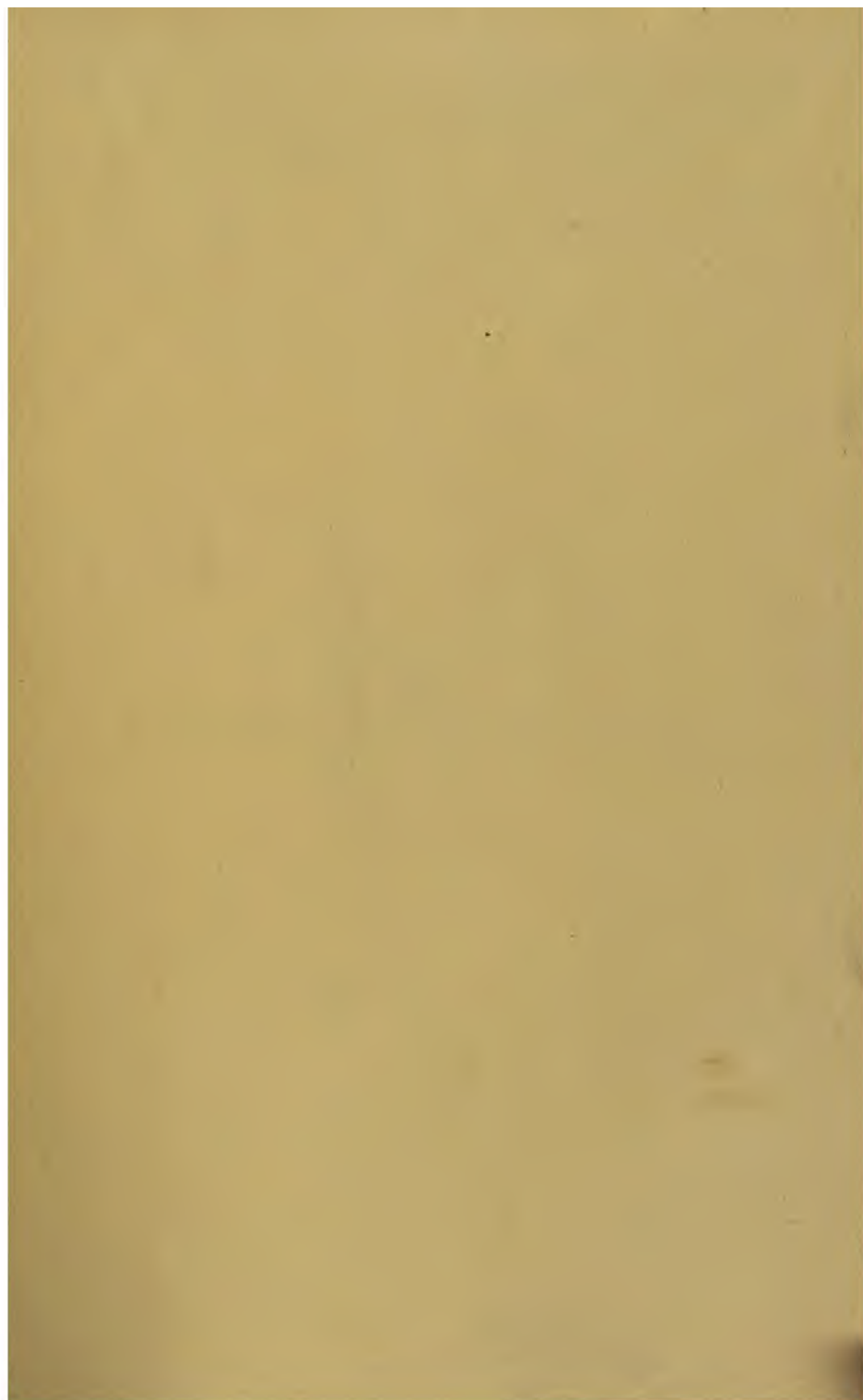
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**RABBITS**  
**FOR**  
**PROFIT AND RABBITS FOR POWDER.**



# RABBITS

FOR

## PROFIT AND RABBITS FOR POWDER.

A TREATISE  
UPON THE  
NEW INDUSTRY OF HUTCH RABBIT FARMING IN  
THE OPEN, AND UPON WARRENS SPECIALLY  
INTENDED FOR SPORTING PURPOSES;

WITH  
Hints as to their Construction, Cost, and Maintenance.

BY  
R. J. LLOYD PRICE.



HORACE COX,  
"THE FIELD" OFFICE, 346, STRAND, W.C.

1884.

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**LONDON**

**PRINTED BY HORACE COX, 346, STRAND, W.C.**

## DEDICATION.

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TO MY FRIEND

CHRISTOPHER WILSON,

OF RIGMADEN,

IN REMEMBRANCE OF MANY EXCELLENT DAYS RABBIT SHOOTING ENJOYED  
TOGETHER, AND IN GRATITUDE FOR MUCH VALUABLE INFORMATION  
*IN RE* MR. CONEY (THE FOUR-FOOTED ONE) SO OFTEN VOUCH-  
SAFED, THIS LITTLE TREATISE, UPON AN ANIMAL ABOUT  
WHICH HE KNOWS SO MUCH, IS INSCRIBED BY

THE AUTHOR.



## PREFACE.

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THE *raison d'être* of this little work is that this particular epoch of our existence, the good year 1884, may fairly be entitled the "rabbit age." Rabbits, tame ones at all events, certainly received a certain amount of attention from our forefathers, for, in 1580, we find "Tusser," who makes the earliest mention extant of this species of animal, saying, when writing the abstract of "January's Husbandry,"

Let doe go to buck,  
Wish "coney" good luck,

the word "coney" being evidently derived from "gwenhingen," the word for rabbit in my own language—the Welsh, which again can easily be traced to have sprung from the Latin "cuniculus." The ancients evidently regarded the rabbit also as being a source of profit under certain conditions, as, in 1631, we find Gervase Markham, in his "Way to Get Wealth," dealing in an elaborate discussion on the various sorts of what he calls "these tame rich conies," and giving minute instructions for, according to his lights, keeping them at a profit. So again, nowadays, people have got it into their heads that there is money in rabbits, as there certainly is sport; so the indication in a practical manner of the most likely means to verify this conclusion was the object of the series of articles, written for the *Field* newspaper, at the request of the editor, of which this volume is partly a reprint.

The first few chapters will be found to treat upon and explain, it is hoped clearly, an excellent, though somewhat novel, system for rearing rabbits in confinement whilst yet

they enjoy all the advantages and none of the drawbacks of freedom.

This interesting and very remunerative method of rearing rabbits in large quantities has not hitherto been sufficiently well known to attract the many votaries who are certain, when better acquainted with this new industry, to worship at its shrine.

The capital required for rabbit farming upon this principle is but trivial. A five-pound note will provide anybody with three hutches and sufficient stock for them, as a trial essay, it is a pursuit essentially adapted for the amusement of children; while adults will find their rabbits quite as fascinating a study as the domestic fowl, to which so many persons devote their time and talents; whilst, on a more extended scale, to the small freeholder, farmer, market gardener, or any one with a few acres of grass land at his disposal, rabbits will be found a remunerative and not very troublesome addition to any other kinds of stock that may be already in possession, while the value of this system for increasing and improving the quality of the herbage is unassailable. The old proverb, "Give a dog a bad name, and he will keep it," is equally applicable to rabbits; it has been constantly asserted that they are the curse of the country, and all the force and influence of the Liberal party in Great Britain was a few years ago expended on a measure for, it was supposed, their total abolition—surely an attempt to rob the poor man of his favourite food! But listen to this, oh, ye farmers who find rent-paying a difficulty: A cow consumes daily as much grass as will 150 rabbits. The 150 rabbits will in twelve weeks realise, at 1s. 6d. each, 11l. 5s., whereas the produce from a cow during twelve weeks will certainly not amount to 6l.

Bully for bunny.

Again, the list of animals which comprise our food supply is but a very limited one, and has been but slightly, if at all, increased since the days of the Patriarchs; consequently any man who can introduce a little change into the national diet

may be regarded in some degree at least as a benefactor to his species.

No claim whatever is laid by the present writer to the invention of this new system, though a few improvements thereof he may possibly be accredited with. His share has principally been confined to experimenting on the various breeds of rabbit with a view to discovering the most suitable and remunerative sort for rabbit farmers. This he has, he believes, accomplished, and a full description of what is believed to be the best breed of rabbit for hutch farming will be found in the following pages.

Now a few words as to the second or more sporting portion of these letters. It has begun at last to dawn upon the much-harassed mind of the game preserver in general, that pheasant shooting, though pleasant enough, particularly in wild coverts in a mountainous country, where birds must fly high—which must be also, unfortunately, usually the most expensive and difficult location for the rearing of tame game—has become of late years too expensive an amusement to be indulged in—thanks to agricultural depression and other causes—with impunity, while, owing to the Ground Game Act and the efforts of a Liberal Government to render any sort of preservation as difficult as possible, rabbit shooting is rapidly becoming a dream of the past; so it occurred to the author of these remarks that a few suggestions as to the best method of combining good sport—for rabbit practice in heather, fern, or any other good covert may very justly be so termed—with at least the minimum of expense, if not with a somewhat reasonable prospect of a certain amount of remunerative interest in the end for capital expended in fencing, &c., may not be altogether unacceptable to brother sportsmen, it having been the good fortune of the writer to have enjoyed, through the kindness of friends in different parts of the British Islands, for the last few years, unexceptional advantages for practical experience in shooting through and comparing with each other a good many of the best rabbit warrens that exist for sport first, and for profit as a secondary consideration.

To a third, and probably still more lucrative plan for the production of a large supply of rabbits for the market, *i.e.*, the warrens situated by the sea shore, and of which the ocean forms one side of the fence, the interior consisting principally of sand hills, and the food of the inhabitants mostly of "bent" or "brent" grass, and in which no shooting whatever is allowed, the ferret and purse net doing the work of destruction surely, silently, and more profitably, it is hardly considered necessary to allude, so few persons being in a position as owners of a convenient sea frontage in remote districts—where the poacher cometh not—to carry out these lucrative undertakings. A passing word of advice to any on whom fortune may have smiled sufficiently to have presented them with the proprietorship or tenancy of such favourable localities for rabbit culture, not to neglect their opportunities, may be deemed sufficient. My readers will, I trust, excuse me for the casual manner in which now and then this important rabbit question is treated, and the occasional inconsequent jumps from one subject to another, which, without rewriting the whole of the published matter from beginning to end, it is impossible to eliminate without the expenditure of more time than is just now available. I can only plead in excuse that the articles were originally written solely for weekly, *i.e.*, ephemeral publication, and not with any idea that they would receive the compliment of a "permanent situation;" and again, I must allude in apology to the levity, or, better word, "chaff," with which in some instances the explanations are leavened; only begging those who may honour these pages with a perusal to bear in mind that a rabbit in the best regulated household is considered but a dry subject if when boiled down he is not smothered with a somewhat pungent and highly-flavoured sauce.

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"Too little and too little known."—DRYDEN.

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# PART I.

## RABBITS FOR PROFIT.

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### CHAPTER I.

#### INTRODUCTION OF THE NEW INDUSTRY.

"In every rank, or great or small,  
'Tis industry supports us all."  
GAY, "*Man, Cat, Dog, and Fly*," Fable VIII.

It is now pretty well admitted on all sides that our farmers, if farming is to exist much longer in England as a recognised industry, must supplement the usual methods of making a profit—which, until a Government more thoughtful for their interests than our present rulers is invented, may almost be described as obsolete—by any kind of illegitimate, or what may be termed "fancy farming," that may offer any reasonable promise of success. Poultry farming is, from what I can gather, profitable but in very few instances; the pin has effectually pricked the bladder of Mr. Gladstone's "jam;" and the expense and uncertainty attendant upon open warrens for the culture of the wild rabbit make them, what with the dangers from snow, poachers, murrain, and tainted ground, excessively dubious speculations, although, as regards the sport that may be obtained in them, the pursuit of which is in itself an obstacle to profit, there is another side of the question.

Now it will, I think, be admitted on all sides that the demand for the rabbit as an article of food has always been considerable, more especially amongst the poorer classes and in our mining districts. This demand, as other meats get dearer, is steadily increasing, but not so the supply. Thanks to Sir William Harcourt and his Ground Game Act, the poor

man has not only a greater difficulty in obtaining a plentiful supply of his favourite food, but rabbits have gone up most alarmingly in price. It is but a very few years since two shillings per couple was considered an excellent price for trapped or wired conies; now three shillings, and even more, are eagerly offered by competing dealers, who draw no line, but accept the victims of the breechloader with the same avidity as those of the snare. I have no reason to suppose that the value of the rabbit skins has gone up; in fact, the silver greys fetch nowadays no more than the common grey animal; it must be the flesh that is so anxiously sought after.

Does not then a simple method of affording a constant supply of dead rabbits almost throughout the whole year, and that without the necessity for devoting to their production any very large area of ground, offer to the farmer, market gardener, or small freeholder an enticing new industry, bearing upon the face of it the probabilities of large profits, provided that a suitable market can be found within a reasonable distance, which can hardly be a matter of much difficulty? There have been hitherto but three methods tried, so far as I am aware, with a view of producing large quantities of rabbits for the market. The first is keeping them in inclosed parks or warrens, open to the objections stated above. The second is the attempting to fold them like sheep in movable inclosures of wire netting, which does not answer at all, the constant exposure, without shelter, being fatal to the young ones, who die off in crowds at the first approach of wet weather; whilst, although the actual rain does not injure the full-grown rabbits, yet the constant filling of their stomachs with saturated food soon brings on liver rot, as with sheep, and they follow their young; should a permanent shelter be erected in the fold for their shelter, it soon becomes tainted by constant use. And, besides, what is the use of keeping a lot of old rabbits when you know you cannot rear young ones, which are the saleable article? The third and most successful of these different methods is that adopted by the peasantry of Belgium and Holland, who crowd our metropolitan markets with those well-

known boxes crammed with a compressed mass of red, shapeless flesh, composed of skinned rabbits, which, however, when re-opened and properly restored to a semblance of its former self, fetch very often as much as eightpence or ninepence per pound.

These Dutch rabbits are reared by the cottagers abroad in little brick or wooden hutches, a small space somewhere handy being inclosed with net or wire, in which the rabbits are exercised daily for a short time. The young rabbits, when fully grown, are then disposed of to the truck (or middle) man, and make their appearance in England, as before described. This plan, though successful enough upon a small scale, would never do for the man who aims at making something more than a small addition to his income from "cotton tails," as our Yankee cousins have it. Overcrowding, dirt, murrain, and filth soon render these small, permanent breeding places mere pest-houses, and the consequence is the development of one or other of those diseases for the cure of which so many "books on the rabbit" are written and sold, not one of these ills being, in my opinion, the least likely to attack the rabbit if reared upon the only sensible plan—that being to try and assimilate his existence as much to nature as possible.

Now, to explain; and, premising that I am writing after considerable experience in the matter of rabbits, and after consultation with others also deeply interested in the question, I venture to assert that the new system of rabbit farming appears *primâ facie* to be likely to explode the now prevalent theory "that rabbits cannot be kept healthy for any time in large numbers." The Mitcham company which was formed for this purpose was, I believe, a total failure, being conducted on the principle of surrounding an inclosed room with separate little shut-up boxes, like lockers, with ladders for the men to climb up and clean and feed the topmost rows, asphalte floors, and I know not what other expensive arrangements. Naturally, the confined air soon got foul, the stench was oppressive, and the stock died.

A supplementary system of farming which can be carried on without interfering with—on the contrary, benefitting greatly—the ordinary operations of husbandry, which brings grist to the mill, uses up much that would otherwise be wasted, and the labour attendant upon which can be performed by children, must possess undoubted advantages, not only for the farmer, but for anyone who can muster up an acre or two of grass land, and a few pounds to commence operations with; for another great advantage of the new industry that I am about to describe is that very little capital is needed to make a start upon, fifteen pounds expended upon hutches and about three sovereigns on their inhabitants, would suffice for an ample commencement for a beginner, or any person anxious to give this operation in rabbits a fair trial. My own experience is a case in point. I commenced with two or three does last November. (These lines are penned on the 5th of July, 1884.) My stock numbered eight all told in January last, and now there are at the present moment two hundred youngsters in the cages, not counting old does and bucks, and a very large number of young ones have been disposed of alive meanwhile. When procuring the stock it should not be forgotten that a party of hens in a movable fowl house form a very material addition as they follow the hutches round the field, and pick up and utilise a quantity of food which would otherwise be wasted.

Small capital and quick returns are a special feature of the system. This is not like many other industries where a man has to stand out of his money for a lengthened period. No, the nimble ninepence comes to the fore, and three months after making a beginning, money may be expected to be coming in. But the most valuable of inventions, if lost in obscurity, becomes valueless, and I am confident that among the public in general—had the system by which a rabbit, though kept in confinement, enjoys all the advantages of liberty, and is enabled to feed without assistance upon his natural food the herbage, been more thoroughly explained, either in the columns of the *Field* or elsewhere through some

similar popular medium, the notion would not have been so prevalent that rabbit farming upon a large scale was, as poultry farming is admitted to have being, bound to fail.

We shall soon change all that. I have very little doubt, in a short time the urban poulterer will look to the farmer for a weekly supply of young rabbits, and order the quantity he requires just as naturally now as he looks to him for mutton, eggs, or butter. And it is difficult to see why a trade that offers such excellent prospects of lucrative success should be left almost entirely, as is undoubtedly the case at the present moment, to foreign competition.

Every farmer, land owner, market gardener, or freeholder, in fact any person holding in his possession land, either of his own or of other people's, must find odd spots which are not essential for his ordinary farming operations—places that cannot be mown, &c.—and these can all be utilised for the purpose to be now described, even if it is not considered desirable to devote the best land upon the farm to the hutches containing rabbits, which form the backbone of this system, and to allow them, as they should do, to follow the scythe.

As many of my readers are doubtless aware—though, as I have never happened to come across much correspondence on the subject in any of the journals devoted to agriculture, or the “fancy,” it is possible that there are many who are still in ignorance—the “Morant hutch,” which I take to be an essential for the safe and profitable rearing of rabbits, has no bottom, excepting one of galvanised wire netting, which allows the natural herbage to push through the meshes when the structure is moved forward, which should be done two or three times a day, just a space the size of the hutch, so as to offer the occupants fresh food. Thus feeding and cleaning are done by one movement.

The rabbits have plenty of room to move about in these hutches, those for the breeding does being 5ft. by 2ft., and those for the young ones 6ft. by 3ft. These latter will contain twelve rabbits, and they will be inhabited for about six weeks, as the best plan is to leave the young with their mother for

six weeks instead of four, as was originally done, and in twelve weeks altogether they ought to be fit for market, at a cost for food of at most sixpence each, for a penny is more than the price of a pound of oats, which is ample for each young rabbit each week ; indeed, I am inclined to believe that

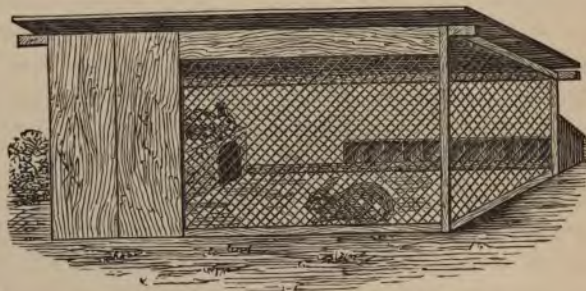


FIG. 1.

from, say May until October, they will thrive without any artificial food whatever, and fatten and do well upon grass alone. Twelve of these hutches, if moved twice a day, will go over about four acres of ground in a season, and the quantity of manure deposited (which enriches subsequent



FIG. 2.

crops) must be seen to be believed ; the hutches, in fact (of which I inclose sketches cut from a small book published by Major Morant on the subject), form a sort of movable two-roomed cottage, with sleeping apartment and dining room, the floor of the bed room being protected when required for

the breeding does, and at other times when desirable, by a movable wooden board laid under the wire. The back, both ends (in the last new pattern), and 2ft. of the front, are of close board; the back lifts up with a hinge, and is kept open when required by a prop for feeding or handling purposes; and the shelf shown in the corner forms the common bedstead in wet or damp weather. When once the young rabbits are sufficiently active to jump up on this, the wooden flooring is no longer required. The trough shown at the back has in the latest and improved form of hutch devised since these blocks were printed been moved to the centre of the hutch, so as to allow the rabbits to feed altogether at will, some on one side and some on the other; and, as they only eat their corn at night, contenting themselves with their grass all day, any food in the trough that is not found devoured in the morning can remain, and so save extra provender to the feeder.

Rabbits are extremely cleanly and regular in their habits, and all offensive matter will invariably be found in one spot, under the shelf.

It should, in justice to Major Morant—who is, so far as I know, the sole inventor and producer of the very excellent rabbit hutch depicted above—be more clearly stated that the drawing in question is from a most interesting little pamphlet published for him by William Ridgeway, 169, Piccadilly, price 1s., entitled “Rabbits as a food supply.” With this, and the “hundred ways of cooking” the same in his pocket, the intending rabbit farmer would at all events start with abundance of excellent theory to begin upon; but this new industry is, indeed, so new that one cannot venture at present to say with very absolute certainty “this is so;” but the qualification, “I think or hope it is so,” must always be taken as read. But there can be little doubt, if the demand for a constant rabbit supply goes on increasing as at present, that some energetic capitalists will spring up to try the outdoor hutch method on an extended scale; and nothing would surprise me less than to see figuring in the columns of the *Field* some

fine Saturday a graphically worded appeal to the B. P. to entrust their savings to "The London Rabbit Supply Association Limited," capital "anything you like," and the major's name on the direction. Although personally I confess that I think this is an enterprise more adapted for the small capitalist and for those who can afford personal supervision.

The hutches, there can be no doubt, could be produced at a very much less cost than at present, if turned out in large quantities by some firm having planing and every other appliance of modern machinery at their command; nor, except on the supposition that it might make them heavier to move, do I see any insuperable objection to constructing them of galvanised iron instead of wood, which, if the wired netting at the bottom were also well tarred, would certainly render them stronger and more durable. The bottoms of all now sent out are fitted with iron strips of sheeting, to which the wire is attached, so as to keep the wooden portions of the hutch from contact with the wet ground, and so render them more lasting and durable; the iron plating, so to speak, forming also an extra protection against the inroads of vermin. The few that were first in my possession, and which I procured last year, with a view of testing practically the new theory as to the possibility of breeding the rabbit in large numbers, were procured from the manager, Blackerton Farm, Dulverton, in Devonshire, where Major Morant resides. Certainly they are well put together, well planed, morticed, painted, and in every way satisfactory; still the cost seems heavy, and, were there a demand, this could without doubt be greatly reduced. We now manufacture our own, paying, of course, on all sold a royalty to the inventor.

---

## CHAPTER II.

### THE HUTCHES AND THEIR INHABITANTS.

"But he's short lived that with his death can do most good."

DONNE, "*The Progress of the Soul*," verse 17.

HOWEVER, having the hutches, the question of course at once arises as to what sort of rabbit to put into them; and here, though anxious to impart as much information as lies in my power, I must state that I can really hope to do very little more than relate my own experience in the matter, and ventilate theories which I believe in myself, for the consideration of those interested in the subject. I had gathered from a perusal of the pamphlet that Major Morant had been experimenting on various sorts. Belgian hares, Angoras, lops, &c., all were mentioned; but, bearing in mind that the object of the experiments was the production of a marketable rabbit, in a way by which he would remain your own property independent of Sir William Harcourt, and at a price which would remunerate the producer, to further which desirable object it was essential that the rabbit should not remain any longer than was absolutely necessary upon your hands; and fancying—I am not quite sure with reason—that Englishmen have a sort of objection to eating an unmistakably tame rabbit which they must know has been reared in a box, and whose skin is a regular Joseph's coat, all sorts of colours, although I am told in London these tame rabbits do sell for 4*d.* or 5*d.* per pound; and seeing that I do not possess any very extended connection among the hatters, Angora breeding would have proved a waste of time; so the Belgian hare tribe was finally fixed upon for experiment. Two very fine does and a buck were procured for me by a friend—I believe from Baily's—at a cost, though, of no less than 10*s.* a piece, which

was rather an eye-opener, and set me casting about for some cheaper method of laying in "primary stock," A solution of this problem soon turned up in the pages of your excellent contemporary the *Exchange and Mart*; for some few weeks advertisers offering anything in the shape of Belgian doe rabbits had a merry time of it, and, at the average price of about 5s. per head, the requisite number were soon procured; all those that were said to be in kindle were so, and those that were not supposed to be, were equally, if not more so. The difficulty appears to me to be ever to find a Belgian doe not intent on "surcreating" her species, to coin a word. So prolific is this kind of rabbit, it is quite astonishing.

As soon as a respectable quantity of full-sized Belgian hares had been bred and collected, they were killed and despatched in a hamper to a well-known Manchester dealer as an experiment, one of them, I well remember (the largest) weighing 6lb. The end was far from satisfactory, the meagre return of 2s. 3d. per couple being the result, with an apologetic epistle from the consignee—"Very sorry, but Lancashire folk wouldn't buy them things; they wasn't rabbits, and they wasn't hares." This was of course very true, so the only thing was to cast about for a more popular sort of animal to experiment upon. Luckily, the problem soon solved itself. One of Major Morant's Belgian does had escaped by accident, and remained loose about the fields for some nights, the consequence being a fine litter of half wild-bred rabbits. One of these (a gentleman) he kindly sent down as a present, and at once I saw in him the rabbit of the future—a nice, clean, active fellow, the real wild colour, and short ears; as he squatted you would have taken him for a genuine "aborigine." Only when he started up and moved about did you perceive that he was perhaps a couple of sizes larger than a hedgerow bunny. This new sultan was soon inducted to his harem, and with the happiest results. The produce grew and multiplied, and although it being winter and a first essay, a portion of the rearing process was conducted under partial cover in some little, red brick sheds, with small wire inclosed yards

attached to them, that had been constructed as a sort of "hedge," in case the outdoor hutches showed any signs of failure, the results were satisfactory. In about twelve weeks another small cargo was again on its way to market, this time to Birmingham, realising in the hardware town a respectable price, viz., 3s. per couple—a sum which, at least, gives a fair profit, and, for aught I know, may be increased should this fine class of rabbit get better known and appreciated. It is sleek, clean, and healthy-looking, a regular wild-looking, short-eared sort. All you would remark, did you happen to see them hanging up outside your poulterer's, would be, "Dear me, what remarkably fine rabbits;" you would stroke with pleasure their glossy coats, and not until you had inspected and turned and twisted for some moments would you begin to suspect that nature had not had all her own way in the production.

The rabbit-farmer's rabbit of the future will be, I believe, the Belgian hare crossed out twice with the common wild rabbit. The cross is easily got if you have rabbits about your place. If you are also free from foxes, simply tether your doe out for a night or two with a strap round her hind leg, attached to a cord tied to a loose ring, running freely round a post firmly fixed in a field. The doe can neither get away, nor can she hurt herself. Where a wired-in warren is available, nothing more is required than to turn the lady out on the loose for twenty-four hours, and catch her again with a landing net, which is easily done, the disposition of this breed being tame and gentle in the extreme. This quality I am glad to find is transmitted to the crosses above alluded to—very different from the rampageous maniac that a real wild rabbit becomes if you attempt to confine him; and it is most curious to perceive the tendency to squat at once which is inherent in the half-breeds. When you touch their hutch to move it for their fresh meal, down they go a humped-up heap on all fours; and they don't even keep their eyes on you, showing that fear is not the cause of this supineness. No, their eyelids close whilst any movement is going on; the

instant that ceases they are up to time in a second, and eating away like a fellow who has just ordered a set dinner in a restaurant, and is anxious to get as much as he can for his money, knowing he has to catch a train. Occasionally, also, it is necessary to move in a cart or sleigh a number of these hutches at once, piled one on top of the other. Then how valuable is this squatting propensity; no tearing about or scrambling up and down the wire sides of the hutches; no squeaks of terror, as, without experience, one would be led to expect. Not a bit of it; each rabbit becomes a little motionless ball of fur until the journey is completed, and *terra firma* is again reached, when "hey, presto!" all is changed, activity reigns supreme, and each set of white teeth becomes a mowing machine.

The fecundity of these animals is enormous. I myself have one doe which, between the first of December and the first of March, produced no less than nineteen young ones, all of which thrived and did well, and this at the very worst portion of the year for rabbit breeding. This doe weighs about 8lb.; and, supposing that her young ones averaged 4lb. each in twelve weeks' time—which, being only a first cross, they would easily do—you have over 70lb. of excellent food produced in a quarter of a year, running to more than 300lb. in a twelvemonth. This is thirty-eight times the weight of the mother, or several times the size of what is considered a good sheep in our country, viz., 60lb.; and, at 1s. 6d. apiece, the product of this single doe, supposing they did all live, would be in actual cash 5l. 14s.—a pretty good return on the outlay of thirty shillings for the hutch, five shillings for the doe (capital account), the wages of the man who looks after them, and an outlay of about one pound per annum for hard food for the old doe.

The question of food and production ought to be easily calculated, though there have been many arguments, and, indeed, somewhat heated ones, in the columns of the *Field* upon this subject since this portion of the articles on rabbit farming was originally published, but you cannot calculate

exactly to a nicety what amount of hard food will be consumed in a twelvemonth by an old doe. She varies at times; she has a large litter to suckle and sustain, perhaps as many as twelve, when of course she requires more nourishment; perhaps the next time she has only six or seven, when not so much extraneous nourishment is required, another month perhaps, she may be barren altogether, when "short commons" will naturally be her portion; but a very liberal average may be allowed her in fourpence a week, which, to put in round numbers, I call a pound per annum. The cost of food for the young ones is much more easily calculated, for they live for six weeks entirely upon their mamma, and all the food goes through her; for the second and last six weeks of their existence, during which time they occupy the larger, or state hutches, they will do capitally well upon one pound weight of hard food, either Indian corn or oats, per week, the cost of which is, it will be found, under one penny, but a penny let it be as more convenient for our purposes.

An old cross-bred doe of my pattern ought to produce at least sixty rabbits per annum. Sixty rabbits at one penny each is five shillings per week, and for six weeks comes to thirty shillings exactly; therefore, the *vexata questio* as to cost of the keep for a doe and her progeny resolves itself into a sum of two pounds ten; the value of the sixty supposed produce is four pounds ten, so that two pounds clear remain from each doe to the producer to pay rent, interest on capital account expended in hutches and rabbits, labour, &c., and I should say that one may reasonably expect to make about thirty shillings clear profit per annum out of each doe that lives, is healthy, and attends strictly to business; a very nice little addition to any man's income, even if he only owns a few hutches, whilst, if gone in for upon a larger scale the profits can still be calculated on this easy scale, though labour would come proportionately cheaper in a large establishment than in a small one. I have taken in this lower estimate a pessimist view of matters, as most probably a doe will produce considerably more than sixty young

ones per annum, and the former estimate of 5*l.* 14*s.* prove correct; more especially considering that I have purposely put the amount of corn to be given much more than will be found really necessary.

Two lads can move two hundred hutches and feed their occupants in an hour and a half, carrying their food along with them in a wheelbarrow or hand-cart. Two hundred of these hutches, standing in one field, would not taint the atmosphere for two hundred or any larger number of other hutches standing in the next, so that the stock that can be kept, provided you have ground enough, is practically limitless. They are sheltered from rain, vermin, dogs, &c., and the bulk of them do not live long enough to have the chance of contracting any murrain or disease to which their actually wild brethren are so prone.

On a bright summer's day it is indeed a pleasure to take a stroll between the rows of hutches, and witness

The pretty little rabbits,  
So engaging in their habits.

each sunning himself and nibbling the herbage, totally devoid of fear, and only hoping that you have come to move his hutch, and provide him with a second course.

The hutches are made in pairs, the opposite ends of each pair being closely boarded up, so that at night, or in rain, snow, or wind, the outside pair of each four can be wheeled inwards and form a square—a most admirable arrangement, as protection can thus be given from any wind in any quarter; in fact, unless the man in charge should forget to feed them, they would appear to have every comfort and advantage possessed by their brethren of the open, “only more so.” Now, is there any other plan except this in which a large number of rabbits can be kept in health and confinement? If there is, to use a Penleyism, “I want that plan badly.” Another great advantage that the hutch-protected rabbits have over their wild brethren, is the complete immunity from the attacks of all kinds of vermin which they enjoy; no decimating by attacks from stoats, weasels, and rats, provided

that the guardian wire netting is small enough in the mesh, while the dog, cat, nay even reynard himself may prowl round and round, but helplessly and hopelessly. He may "look, but mustn't touch," while the roof effectually baffles all efforts of the hawk or carrion-crow tribe; thus the protection from their enemies alone must mean the salvation of a very large per-centage of young rabbits that would assuredly be made away with in a state of nature. I hope that I have now made it clear that, from the great dangers which beset the wild unroofed-over, or unconfined rabbits—namely, the devastation wrought by vermin, the exposure to rain, the diseases which spring from a tainted atmosphere, and the constant living upon wet food—the new form of movable hutch is a simple and efficient protection.

Keeping at first personally but a few does for experiment, although they are now allowed to multiply as fast as possible, and nothing dead marketed to dealers but bucks, I did not consider it worth while to leave them out in their hutches all last winter; but Major Morant, whose acquaintance I have had the advantage of making, assures me that he did so, feeling that it would be impossible to proceed with certainty to farm a very large quantity of rabbits. involving the investment of a considerable sum of money in hutches, until this point was thoroughly cleared up. His does, he informs me, have remained out all through the past winter, and were once thoroughly snowed up, and had to be dug down to for feeding purposes, but the inmates were none the worse; in fact, as long as they are fed, snow keeps them warm. One hutch, he told me, had got blown over, and was lying in a most uncomfortable position on its side, but the anxious mother had cuddled her family up somehow into a corner, and quite unmoved, was waiting events. This accident might easily be avoided by hooking the hutches together all along the line, or in case of single ones pegging a rope or wire stretched over the top, down on both sides.

In these hutches the does rear almost every young one that is born, the mortality being small, and, as they breed all the

year round, and all young does born before May will themselves breed the same year, the production, as is easily seen, is enormous. I do not like to go into too many calculations—they really look so incredible upon paper—but shall continue to experiment more largely in what I now consider to be a proved success.

The hutches do not injure, but greatly increase, the crops on a farm kept on this plan. The small portion of dry food given greatly increases the value of the manure. The hutches follow cattle, sheep, or the scythe; but they do not stand well on uneven ground. You must, if possible, find a tolerably even surface. "Finding a flat on the turf" ought not to be difficult; ahem! What the rabbits eat is hardly missed; indeed we consider their food is paid for by the extra quantity of hay and clover produced the next season off the ground they have come over; and no food is ever wasted in these hutches—all is promptly consumed. Some doubts were of course expressed, when I first commenced this plan of keeping rabbits, as to whether as a table rabbit they would not exhibit coarseness, a woolly flavour, or some other quality which would deteriorate from their edible value. This question was of course easily settled by practical experiment, so during the month of January last a good specimen from a lot just going to market, of the orthodox age (twelve weeks old) was killed, kept for three days, then plainly roasted with veal stuffing and bread sauce. A committee of investigation was appointed to hold the inquest, and a most particular person was placed in the chair. I personally felt nervous, I confess, this new-fangled process of rabbit production not having been received entirely with shouts of approval from my "*Lares and Penates*;" but the result was eminently satisfactory. The flesh of the rabbit was pronounced equal to, if not better than, "the very best wild;" and, indeed, except for perhaps a little more closeness in the grain, and possibly a shade more whiteness in the colour of the flesh, it was impossible to detect any difference. There was more of it certainly, but in a nursery, say, or where there are many hungry mouths to

fill, would not this be considered the reverse of a disadvantage? Any way, my rabbit was voted a success; and the last tribute to his manes was contentedly performed by a very old, respected, and whilom famous colley, who once—it may not even yet be totally forgotten by one or two of those who read these lines—cast aside the servile adulation due to an “editor,” and proceeded to make his mark upon a very celebrated gentleman of that profession who dared in his presence to disparage his species. This last remark in the original article had the effect, when published in the *Field*, of extracting the following caustic editorial, which, as the lightest words of such an authority as “Stonehenge” should always be carefully preserved, I do not feel inclined to leave unreproduced.

[Although we do not acknowledge that the celebrated colley above alluded to is a good judge of boots, we fully admit his judgment as a *gourmet*, having repeatedly witnessed a display of his powers in making a selection between *pâté à foie gras* and roast mutton, or some equally delicate operation.—ED.]

A question which is very often asked regarding the rabbits in hutches is, “how often in a year can the hutches occupy the same meadow?” and of course to persons possessing only a limited area upon which to keep their hutches this question may be of importance, but to most people who would naturally wish to get as much of their land well manured as possible, the object will be to get the hutches over as much of their grass land and as quickly as possible, so as to benefit to the fullest extent by the very excellent manure which remains when the hutches are moved forwards, but to allay any anxiety on this point in the minds of those whose available portion of Mother Earth may be meagre, or others who may for some reason desire to manure any particular field, perchance a very poor-soiled meadow, extra heavily, it may be as well here to mention that the hutches can, if it is considered desirable, be allowed to travel with impunity over the same ground four or even more times in the season, and it has been estimated that an acre of grass land will amply

suffice for five does and their progeny, so that the system is equally applicable to the large or small farmer, either of whom will find the hutches a profitable adjunct to the usual farm stock and farming operations, while the labour required is not great, as a boy, if he can be trusted, is perfectly capable of feeding and moving a hundred hutches *per diem*, with ease ; but boys are boys, as we all know, and, if some intelligent adult can be pressed into the service as supervisor, so much the better both for bunny and his master.

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### CHAPTER III.

#### ON THE DANGERS ATTENDANT ON HUTCH RABBIT FARMING.

"Conquer we shall, but we must first contend;  
'Tis not the fight that crowns us, but the end."

HERRICK, "*Hesperides*," 340.

"Out of this nettle, danger, we pluck this flower, safety."

SHAKESPEARE, "*Henry IV.*," Act iii. Scene 3.

ALTHOUGH rabbits, when confined in a hutch close under the master's eye, are undoubtedly safer in the main than those who have to shift for themselves in the open; still there are, it must be confessed, several dangers, some or all of which the rabbit farmer will have to be prepared to face; but forewarned is to be forearmed, and most of these impending calamities have been alluded to and commented upon *ad nauseam*.

Firstly, and most important of all, there is the thief to be guarded against—a very serious question for rabbit farmers living near large towns, or where the poachers are hungry for want of other suitable prey; still it must be remembered that the law of the land would regard with a very severe aspect any attempt to purloin a domestic animal confined in a box, and upon conviction would assuredly mete out punishment with no niggardly hand. Marking your rabbits also in the same way as every prudent gamekeeper treats his hen pheasants in the aviaries to make certain of identification if stolen, would also appear to be a wise precaution, while the branding of the fur of the rabbit with a hot iron carefully performed, so as not to touch the skin and hurt the rabbit, or simply marking the hide with a stamp of your initials in colour, as sheep are always marked would, until the thief had time to skin the rabbit, be a most important preventive.

A good large savage dog, running at night on a short chain attached to a telegraph wire stretching the whole way up one side of the hutches, would be an invaluable watchman, and in the case of a large number of hutches, it might be found desirable to supplement him by human assistance.

It must also be remembered that the hutches are heavy, and made of thick timber, and would take some time to break into, while the noise and stamping of the rabbits, if disturbed at night, would assuredly summon assistance if not too remote. There is also the danger, which is easily preventible by a careful custodian, of disturbing the old doe and upsetting her equanimity by allowing any intruder, human or canine, to approach too closely, and, tempted by idle curiosity, to examine the interesting family before they arrive at the mature age of a week or so.

Then, again, there are the attacks of vermin to be guarded against, attention to which danger was drawn by a gentleman signing himself "Belgian Hare," who wrote in the *Field* that he feared the rabbits would suffer from the attempts of rats and weasels to scratch under the hutches and attack their inmates from below. I cannot do better than close this chapter by reproducing my reply to this gentleman upon this and other points respecting which he wished for information.

SIR,—“Belgian Hare” and myself are pretty well at one, and I should not have troubled you again this week on the rabbit question had it not been that a new danger to kindling does has cropped up. We have plenty to learn yet, and it is desirable to warn all intending rabbit farmers upon the point, and also to present them with the remedy, which I am, fortunately, in a position to be able to do.

I allude to the annoyance caused to the does in confinement by the efforts of their cousins at liberty to scrape acquaintance by night and get inside the hutches. They scratch and scratch again at the wire facing, and even go so far as to bite pieces out of the wooden backs of cages in their efforts to force an entrance—quite stultifying by their pertinacity the famous dictum of the Nottingham bookmaker, alluded to in one of my former letters.

“They are out, but they want to get in;” in fact, like lay brother “Pelican,” they want that badly. Now this is all very well when the old

does are in their normal state; perhaps the noise may keep them awake occasionally at night; but, like the fashionable doctor whose door bell is always ringing, or the proverbial eel, they learn to get accustomed to it, and no evil results accrue. But just before or just after kindling, the tempers of the anxious mothers undergo a thorough transformation, they become irritable to a degree, and their most unkind propensity to revenge their own troubles upon their hapless offspring assumes full play. I have lately lost more than one litter of young rabbits from this cause, so I would strongly advise all owners of hutches which are situated in a field or elsewhere, where the wild rabbits have access, to form a sort of paddock of wire netting fixed temporarily, with the bottom edge turned outwards towards the savage intruders, and to place for safety at nights inside this sanctuary the hutches containing does that are about to bring forth, or that have lately done so.

The question of the attacks of vermin, again alluded to by "Belgian Hare" in his last letter, appears to me to be of such paramount importance that I am unwilling to let the subject drop without attempting to elicit, if possible, some more information upon this head from any readers of the *Field* who have suffered as to their hutches from these pests, or who may have any theories to ventilate as to the prevention of this danger. For myself I have nothing to complain of upon this score. Thanks, perhaps, to an excellent keeper, we are not much bothered with vermin, and although rats do, I fear, exist in greater quantities than they ought to do in the vicinity of the confined rabbits, we have had no trouble with them at all as regards the hutches; nor, as far as we know, have they ever even entered them, which of course they could easily do through the wire frontage, unless that is made of very small mesh.

I have sometimes fancied that perhaps the reason why rats, usually so destructive to anything young, have spared my baby rabbits, has been that they look upon the hutch as a gigantic trap, the smell of the human hand upon the woodwork leading them to this, fortunately for the "enhutched," erroneous conclusion; and that, therefore, from motives of prudence, they have made up their minds to steer clear of the ominous-looking structures, seductive though the bait inside be. This theory may be true or may not be; at any rate, we have had no trouble from rats, and, as I commenced keeping my rabbits in the "Morant" hutches last autumn, surely, if such a misfortune was fated to occur, it would have happened ere now.

I have already explained, in a former letter, which is reproduced below, what I should do were such a calamity as an inroad by vermin to occur; but I think their burrowing propensities, if they have any, might be easily guarded against by the running of a narrow band of very small-meshed wire netting all around the inside of the edge of the hutch, protruding inwards a few inches, so that, if a rat *did* scratch under the iron bar in front, when he poked his nose upwards and attempted to enter the hutch through its wire-netting floor, he would be discomfited, and

would probably retire at once through his own back door, even before his tail had had time enough to follow him.

What Major Morant said in one of his letters to the *Field* is very true. In sheep farming it is the sheep that costs, and not the hurdles you keep him in. *Au contraire* with the rabbit; he is cheap enough even if you lose him—it is the hutch that costs the money, and to this no vermin, unless two-legged ones, are likely to do much harm.

R. J. LLOYD-PRICE.

13, Brook-street, Hanover-square, London, June 5.

Subjoined is the letter referred to above dealing with the question of profit, always interesting, even if reproduced again and again, and also containing some further suggestions for security from the attacks of vermin.

With regard to the remarks of "Belgian Hare," who evidently takes a keen interest in the subject, and with whom I can fairly say I agree upon most points, I may mention that, when speaking of selling the rabbits by weight I spoke of them as they stand, alive if you will, and, as I sell them, untouched; just the same as this very morning I sold fifty Welsh sheep as they stood in the field at 5½d. per pound; but what I did forget to mention, and what "Belgian Hare" may very well put into any further calculations he may favour us with on the subject, was the "skin," which must produce about 2d., possibly more in the winter time.

Calculations and estimates on paper, like comparisons, are odious, and I have tried hard to avoid them as much as possible throughout. Let everyone make them for himself, say I. It would be almost impossible to present to the readers of the *Field* any estimate which someone could not pick a hole in; so, though I have a pocketful made out about rabbits of different sorts and methods, I shall refrain from doing more than generally stating that the most unfavourable one I have been able to make out shows a profit of at least 40 per cent. for hutch farming, including rent and every possible expense, even for one hundred hutches, and the pay of a man to watch them at night, which would be essential in a large establishment of the sort.

As to rent, I consider that the immense benefit the hutches do to the ground quite counterbalances that item. From where my own hutches have travelled this spring, the daisies have completely disappeared, and clover is beginning to show; while the small space of ground on which the few hutches that I had in November last stood is a perfect marvel as regards fertility compared to the rest of the field.

One mistake of mine "Belgian Hare" omits to point out, but I am glad to have this opportunity of doing so. I only put 1l. as the price of the hutch, whereas I see them advertised at 30s.; so 10s. more each hutch

will have to be added to the capital account. Still, for those who, like myself, make the hutches for themselves, paying the Major his royalty, my original figures may very fairly be allowed to stand.

"Belgian Hare" is fortunate if he can find a market for his namesakes; he is, then, in clover, as his *protégés* would like to be, and he cannot do better than stick to it. My experience is different. As I pointed out in my letter of March 22, I commenced rabbit farming with Belgians, but the dealers refused them, or at least only returned a very small and unremunerative price for them. This set me casting about for a more profitable class of rabbit to continue with, having already made up my mind that there was something to be done in hutch rabbit farming when properly understood; and I have really now, I flatter myself, found the "Simon Pure;" at least, judging from the numerous letters I receive weekly from dealers entreating me to forward them a supply of young dead rabbits. There is also a very active demand for them alive, and I have, in consequence, now started a very much larger number of hutches than when I first commenced writing on the subject. Of course I do not pretend to be improving the Belgian hare; I must leave him to his friends, who (your correspondent amongst them) will doubtless take very good care that he will not suffer much. Any old Belgian doe is good enough for me. Good, bad, or indifferent, as long as she will breed, and that quickly, that is what we rabbit farmers want; she is only a "means to an end" in our estimation, as forming the nucleus for the production of a good, fat, saleable rabbit, as like the real thing in colour and shortness of ear as possible—one that the dealers in dead rabbits will buy in large quantities, and that the public, the voracious all-devouring public, will buy again from them, probably at an increased price, when better known as being a better class of rabbit altogether, and yet not suggesting the odious word "tame."

As to the plan of tethering the old doe, commented upon by "Belgian Hare," I am not at all prepared to defend it, except in very peculiar cases. Where a man has a field or very small property, for instance, surrounded by neighbours with plenty of wild rabbits, and where if she strayed off his ground she would be lost, I fully believe that if a fox passed that way of a night you would find but little of your old doe except a "hind leg in a strap." But some means must be taken to get the essential wild cross, which is not by any means so easy as might be imagined.

As to the hutch recommended by "Belgian Hare," I gather from his description that some at least of the floor is boarded and permanent. If "Belgian Hare" will kindly refer back to my letter of March 15, he will see my reasons for objecting to any sort of inclosed hutch, and for preferring the bottomless ones. The addition of an iron casing all round the bottoms of the new sort of hutches makes them heavier, and in consequence very much harder for a stoat or weasel to scratch into. If I ever discover any of the rascals about, I shall put round my hutches,

perhaps at night only, perhaps permanently, a fringe of very small-meshed wire netting, projecting outside the hutch from the bottom, on the same principle as I turn in the wire for the warren fence; and I think that will put an end to their burrowing propensities, if they have any, for is it absolutely certain that weasels will burrow under ground to get at their prey?

In conclusion, let me beg of "Belgian Hare" to keep on at his good work, and as many others also as can be induced to breed this sort of rabbit. We hutch rabbit farmers will soon be glad enough to take them all for our own purposes. So "More power to your elbow," say I, Mr. "Belgian Hare." Good-bye.

R. J. LLOYD-PRICE.

Having now alluded to the various evils to which the poor prisoners in hutches are especially liable, I cannot better conclude the first part of this little work than by reproducing the latter portion of the leading article in the *Field* of June 14, merely adding to the advice therein contained these few words from my own experience. If you rabbit farm at all do not be beguiled into wasting your time, money, and temper, by attempting to rear any large quantity of rabbits in any other way than by means of movable hutches with bottoms composed of wire netting, and not of wood or any other material, and be sure when commencing to start with the right strain of rabbit, which has already been plentifully described, they will be found to be more hardy, equally prolific, and, in most instances, far more valuable than the pure large breed.

"Belgian Hare" has asked whether the keeping of rabbits, otherwise than in warrens, can stand alone as a separate industry? This depends upon the system adopted. If the hutches are kept in one place, as "Belgian Hare" suggests, it is just possible that rabbit breeding might stand alone. Nothing more than standing room would be required; the expense for rental would therefore be small, though, as all food would have to be bought, this item would be heavier than if it were grown on the premises and eaten by the rabbits, as in Major Morant's system. We are, however, inclined to agree with the opinion expressed by Major Morant in his letter printed elsewhere, as to the dangers of keeping rabbits in fixed hutches. On the movable hutch plan, we do not see how rabbit farming could stand alone (nor was it ever meant to do so), because, so much more land being required than the hutches occupy at any one time, the rental would be very much higher. Major Morant has not yet told us how many rabbits or hutches we may keep to the acre, nor

how long a time must elapse before the hutches may occupy a given spot a second time; but as each hutch measures 6ft. by 3ft., and has to be moved twice a day, it is clear that 54 square feet of ground are required daily for each dozen rabbits. If, then, rabbit farming be carried on unaccompanied with farming operations, the land not being actually fed off by rabbits must lie uncultivated, which means that it would not be turned to the best account; and can anyone suppose that the profits would be large enough to cover such waste of opportunities? If they were, why should not the land be utilised? It seems to us, therefore, that if a man rents land with the primary object of carrying out rabbit farming on Major Morant's system, he must in self-defence indulge in farming operations at the same time. But a man who is only a farmer by the accident of his being a rabbit breeder, is in a very much worse position than he who breeds rabbits because he already has a farm. The latter is pretty well certain to be the better farmer of the two, and there is no reason why he should not be equally as good a rabbit breeder as the other. That being so, who is the more likely sort of man to make rabbit farming pay? Clearly the man who has a farm, and who could find the necessary labour in the persons of himself and family, without going to the expense of hiring any extra hands. Next to him comes the farmer who, though content to supervise generally, would not take any active share in the work. In this case labour must be paid for, by which the profits will be reduced. In neither case, however, would there be anything to pay for rent. LOOKING TO THE FECUNDITY OF RABBITS, THE PRICE GIVEN FOR THEM, AND THE CHEAPNESS OF THEIR KEEP, WE CANNOT HELP THINKING THAT, UNDER THE CONDITIONS INDICATED ABOVE, RABBIT FARMING MIGHT BE MADE REMUNERATIVE.

At present we do not know as much about the new venture as we might; so that it would be unwise for anyone to start rabbit farming on a mammoth scale just yet. For this reason, we should fight shy of any rabbit-farming company, which would involve, remember, all the evils of co-operative farming. If farming does not pay a man who sees to things himself, how can it pay a staff of directors, managers, and clerks, and return a dividend besides? If a loss resulted over the agricultural portion of the business, the rabbit breeding would have not only to pay its own way, but to make up for the farm deficit.

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#### CONDENSED HINTS.

THE state or appearance of your rabbits' dung is the best criterion by which to judge of the healthy state of your stock.

Cats and rats are the natural enemies of rabbits, and must not be tolerated. If you want a cat, rear a kitten in company with a couple of young rabbits, and so create a lasting friendship with the tribe.

The general cause of doe rabbits eating their young is thirst—

hence the necessity of giving suckling does a liberal supply of biscuit soaked in skim milk.

Rabbit skins should be dressed in the winter, as the fur is then in the best condition. Fifty skins sewn together, and lined with red baize, will form a handsome travelling rug.

There is less loss in killing and disposing of a rabbit three weeks before than three weeks after the proper age. Every rabbit you keep one month after the time it should have been killed will have consumed as much food as would have kept a rabbit the two months it is growing to maturity.

Feed liberally with the food that costs you least to obtain, and economise and feed sparingly with that which costs you most.

Leave well alone; do not handle your rabbits unnecessarily, especially your does. As *first* litters are often small, it is always well to arrange that an older doe shall litter at the same time as the young one, dividing the litters between them.

Salt is essential for the well-being of rabbits, as it is for all stock; and a little should be given to the doe on the weaning of her young, to assist in drying up her milk. A pinch may also be occasionally given to the young stock, mixed with their bran.

Rabbits should be paunched directly they are killed, and the flavour will be improved by stuffing the inside with a few sprigs of sweet herbs.

To kill, stun the rabbit by a blow behind the ear, and then bleed by cutting the jugular vein; this will make the flesh beautifully white.

Rabbits go in young thirty days, and suckle about a month.

Avoid breeding "in and in;" change your buck every two years; one is sufficient for ten does.

A doe, like a sow pig, should be either giving suck or on the way to litter. She should be *always* either suckling or breeding, except during the months of December and January, when perfect rest may be allowed.

The following will be found a simple and effectual method of curing and preserving rabbit skins: When the skin is fresh, stretch it upon a board or table with tacks, the fur side downwards, and remove any pieces of flesh or fat; now dissolve one ounce of alum in half a pint of hot water, and with this solution wash over the raw surface with a sponge or flannel, and repeat this operation twice daily for, say, three days. The skin may now be dried in the sun or before a fire, and the tacks afterwards removed. To render the skin soft and pliable, rub it briskly between the hands, and afterwards backwards and forwards through a smooth ring; it will then be ready for any use to which you may desire to devote it.

## PART II. RABBITS FOR POWDER.

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### CHAPTER IV. THE SPORTING WARREN.

Food for powder, food for powder."

SHAKESPERE, "*King Henry IV.*," Part I., Act iv., Scene 2.

"Detested sport that owes its pleasures to another's pain."

COWPER, "*The Task*," Book iii., line 326.

HAVING now pretty well exhausted in previous chapters the subject of breeding semi-wild rabbits for the market in a state of confinement, but assimilated as much as possible in all ways to nature—which I firmly believe to be the most profitable method of rabbit production yet discovered, enabling, as it does, any person, be he farmer, freeholder, or even any resident near a common, to add to the usual kinds of live stock that are produced for sale, another and a very simple sort, requiring neither special knowledge nor any very great amount of labour or attention—I shall, until any fresh facts coming to light, demand a return to it, dismiss for the present the interesting question of rabbit breeding upon the Morant or open air system, and discuss for a space the subject of large inclosed warrens, kept up for, in the first instance, the purposes of sport, and, secondly, in the hope—possibly sometimes realised, but more often, I have every reason to believe, fallacious—of getting that sport at a profit, or, at all events, without losing much thereby.

That there are more of these warrens in existence than are generally known is pretty certain. I can recall, at the moment of writing, no less than eight to my recollection, several of which I am intimately acquainted with, and have shot

over more or less frequently. It will not be, of course, correct to indicate too clearly the precise whereabouts of these different warrens. The educated poacher and wholesale depredator may read this book as he reads the *Field*, as well as do all or most legitimate sportsmen, and it would indeed be a poor repayment of hospitality to indicate to the former gentry desirable localities for a successful raid. Still I do not imagine that giving the counties that these warrens are situated in can be considered as pointing too closely to their whereabouts; so, to take the Midlands first, there is a large one, and one of the best arranged and most paying-looking of all that I have seen, situated in Warwickshire, where it will be remembered, some few years since the agricultural depression was very much felt; many farms were thrown upon the hands of the landlords, who were at their wits' end what to do with them. The proprietor of this particular farm being a keen sportsman, and having been obliged, owing to the representations of his tenants, to put down the rabbits on other parts of his property, hit upon the notion of changing this particular holding from an agricultural into a rabbit farm, which was accordingly done, a covert of some twelve acres standing in the centre forming an excellent nucleus. The boundaries were all fenced in with wire netting on three sides, the remaining side, which adjoined the proprietor's own private park, being left open, so that the rabbits could, when they chose, use and sit in the rough clumps of grass common to most parks that have been used for deer. A river and lake on the far side of the park formed a splendid natural boundary, so that this warren is in reality a very large one; but had its drawback, "the usual neighbour." At first it was agreed that the boundary fence should remain open and the rabbits be common property. However, as was natural, this arrangement did not last long, though the respective masters were amicable enough. The keepers, as is their wont, proved utterly incapable of distinguishing between *meum* and *tuum*, and the line of demarcation had soon to be fenced like the rest. In this warren the usual

mistake has been made, the wire having been sunk into the ground, which ancient method of attempting to confine rabbits is, as I will presently explain, an exploded fallacy; and by now the rabbits, unless this has been altered, will have proved a great source of annoyance both to their owner and his neighbouring tenants; but certainly when I saw it in the spring, two years ago, everything looked very flourishing and the stock of rabbits was very large; which prosperity has, I happen to know, continued up to the present moment. Most of the soil in this warren appeared very unsuitable for rabbits, being heavy clay land, in which they would find great difficulty in burrowing. Here, however, art stepped in and assisted nature. A quantity of little round mounds of earth, about six feet high and the same in diameter, were thrown up in the worst fields. In these "tumuli" artificial burrows were commenced with a spade, and the rabbits were encouraged to dig in further and nest in these holes, which they have done in large numbers—a most excellent dodge for heavy lands, and one well worthy remembering. Other artificial hiding places were also instituted for the rabbits by means of large stacks of faggots placed over various parts of the rabbit farm. Before shooting day, a dozen or so of ferrets are quietly introduced among the sticks, the rabbits fly out, and then a temporary fence of wire netting is run round each stack to prevent their return.

Almost everything about this warren was artificial, and most ingeniously planned. The covert in the centre, which was of course the home or starting-point for the bulk of the rabbits, was protected inside by wires running to and fro about a foot from the ground, and communicating at both ends with bells or alarm guns to give timely notice of the approach of marauders, human or canine; while outside the wood, where long netting would be most dangerous, the grass land to the distance of at least fifty yards from the covert on all sides was bristling with thorn bushes and branches of every description, tightly pegged and wired down, and even this was not enough. Large trunks of trees with the branches

left on were actually placed all round in zigzag fashion, so that by no possibility could a long net be set in a straight line for more than about ten yards without encountering one of these formidable obstacles. All these precautions were most necessary in this district, as, the rabbit preserve being situated only about seven miles from a largish town not bearing the best of characters, several inroads had been actually made, and one or two stiffish fights had taken place. In addition to all this, the rabbits were driven in every two hours throughout the night when danger was apprehended, or when the moon was favourable to poaching, by a man with a dog trained to the purpose; and so well did the rabbits get to know what his appearance portended, that, after a very short time, as soon as ever his presence was perceived at a distance, in they all used to scuttle, without waiting for the dog. This also is a most valuable precaution, as two hours at a time is quite enough to give rabbits to feed, and it teaches them to make tracks for their burrows at the very slightest sound. Even the covert for shooting the rabbits in this particular warren is mostly artificial, consisting of long lines of thorns or live branches pegged down in rows or squares, for the beaters to walk through and drive the rabbits across open spaces between, wide enough to shoot comfortably in, along which the guns march each in his own open lane, in line with the beaters. Portions of the land were wire-fenced each year, and crops such as beans, clover, oats, &c., grown in them, which were either harvested and taken home, or partially so, and the remainder handed over as food to the rabbits by pulling up the wire, which was only put down in a temporary manner. This arrangement has also its merits, insuring as it does a certain amount each year of untainted ground for use the next, which must prove a valuable "pick me up" to the stock. This warren, though managed upon an expensive scale, has produced a very large number of rabbits during the three years it has been in existence; but I am not at liberty to give further details.

The next preserve to which I shall allude has been a going

concern for about six years in its present situation ; and on the same property another, now thrown open, had been used for the twelve previous ones ; so that the experience to be gleaned in this case is much more valuable. This warren consists of about 400 acres of rough ground, no arable, situated in the very heart of the Yorkshire grouse moors, more than twelve miles away from the nearest town ; consequently, not much fear is entertained of poachers, nor are any special precautions taken against them. The entrance to the rabbit paradise I am now describing is down a steep ravine, well-timbered, as is also the ascent on the opposite bank ; this wood, which is of large extent, forms a sanctuary, and is never disturbed in any way. For a couple of nights before a rabbit "shoot" long nets are quietly slipped round this covert when the rabbits are out at feed, and pegged down. Keepers walk round all night to keep the rabbits from charging the net, and towards morning the conies settle quietly down for the day in the rough furze and bracken of which the outer warren consists.

There is but little artificial covert in this warren, but plenty of rides are cut to enable the guns to get a clear shot as the rabbits cross and recross. The fence for confining the inmates principally consists of an old stone wall, with wire netting projecting from the top, fastened on to laths about two feet in length, which stick out from the wall towards the rabbits, and are kept in their places by sods of earth, &c., laid along the top of the wall, thus preventing the rabbits scrambling up. There is also some wire, which is let into the ground, and occasions endless trouble through the rabbits burrowing under ; but as the country around is bleak and bare, and on a rough hillside, nobody seems to care very much if a certain number of rabbits do take up their quarters outside the fencing. 1850 rabbits were killed the first time through in this warren last year, and 1200 the second day ; these were considered poor bags, the wind on both occasions having been unfavourable for laying the rabbits out ; the total yield for the season being generally from four to five

thousand. The rabbits were small and poor, being shot in September, a month too soon, and they evidently wanted a change of blood to get up their size again; indeed, I was told that 2s. per couple was the contract price, and even then in most cases three had to go to the couple.

One more description, and enough will have been said to give your readers an idea of the general character of this class of warren. In due course I shall hope to arrive at the actual construction of a warren, and give as nearly as possible the actual cost from the very commencement until the beaters are paid off at the close of the day's work. This last warren, then, is also situated in the north of England, about four miles from the nearest railway station, and a long way—eight miles about—from any town of importance enough to harbour a gang of poachers. It is situated in the very heart of a large game preserving district, where all the landowners stick to their rights, foxes are viewed with suspicion (to use a mild term), and a poacher, if caught, has an uncommonly rough time of it—not before the magistrates. Consequently, from this particular tract of country very few rabbits find their way to an illegitimate market.

This warren is the flat at the summit of an exceedingly high mountain, and consists of, I think, the very worst land I ever saw in my life. "Well!" said I to myself said I, when first introduced to its luxuriant surface, "if rabbits can and do thrive here, no one need despair." Rough heather, bog, fern, swamps, and fegg form the covert. There are no rides cut, and as you march along in line of ten or eleven guns, in stuff very frequently up to your knees, the shooting, of course, becomes extremely difficult. However, if bunny escapes the first barrel or two, someone else is sure to nail him, as all holes are blocked, and there is no escape.

The fence to this warren is principally walling, and on two sides of it are rough larch coverts, about thirty years old, in which the rabbits mostly live, coming into the warren through meuses in the walls every night to feed; though one wonders, on seeing this ground, what on earth they can get to feed on.

It is really only by experience that one realises what will keep a rabbit—aye, and keep him well too, and in good condition. There is nothing for this purpose more useful than the despised and hated “scutch” grass, so hated in Warwickshire and the Midland Counties, but invaluable for fattening and keeping any conies in first-rate condition. There is also a little wire used in the fence of this warren, and this is laid in the right way, which shall be fully explained in due course. Before shooting, all the holes inside the warren are ferreted and blocked, and the blocking watered with paraffin, which keeps bunny away from his domicile for a longer time than any other preparation; and the night before the battue the holes in the wall are stopped after the rabbits are gone through to feed, so they are all there when wanted; and the whole country around this warren being more or less a rabbit preserve, I have very little doubt that other means are taken to “thicken the soup” for a shooting morning. Very large bags are made here, and have been for many years. I remember 1850, 2500, and this last season 1650, being killed in one day, only beating half the ground, and many thousands go to market in the course of the season; indeed, I should say that nowadays the largest bags of rabbits in the British Islands are made upon this estate, the owner of which spares neither time, money, nor trouble to get everything in perfection, even going to the extent of having a frozen larder to hang his pheasants in up till Christmas; while the precautions and preventives in use to terrify unwelcome visitors must be seen to be believed, as of course it would not be quite fair to describe them in print. By the way, the largest bag of rabbits ever made in one single day still remains, I suppose, the celebrated “threes” bag of the late Lord Stamford in Bradgate Park—3333, a description of which, with the means employed for laying out the rabbits, was forwarded by Mr. J. A. Lucas, who acted as one of the officials on the occasion, and printed in the *Field* of April 19, 1884.

## CHAPTER V.

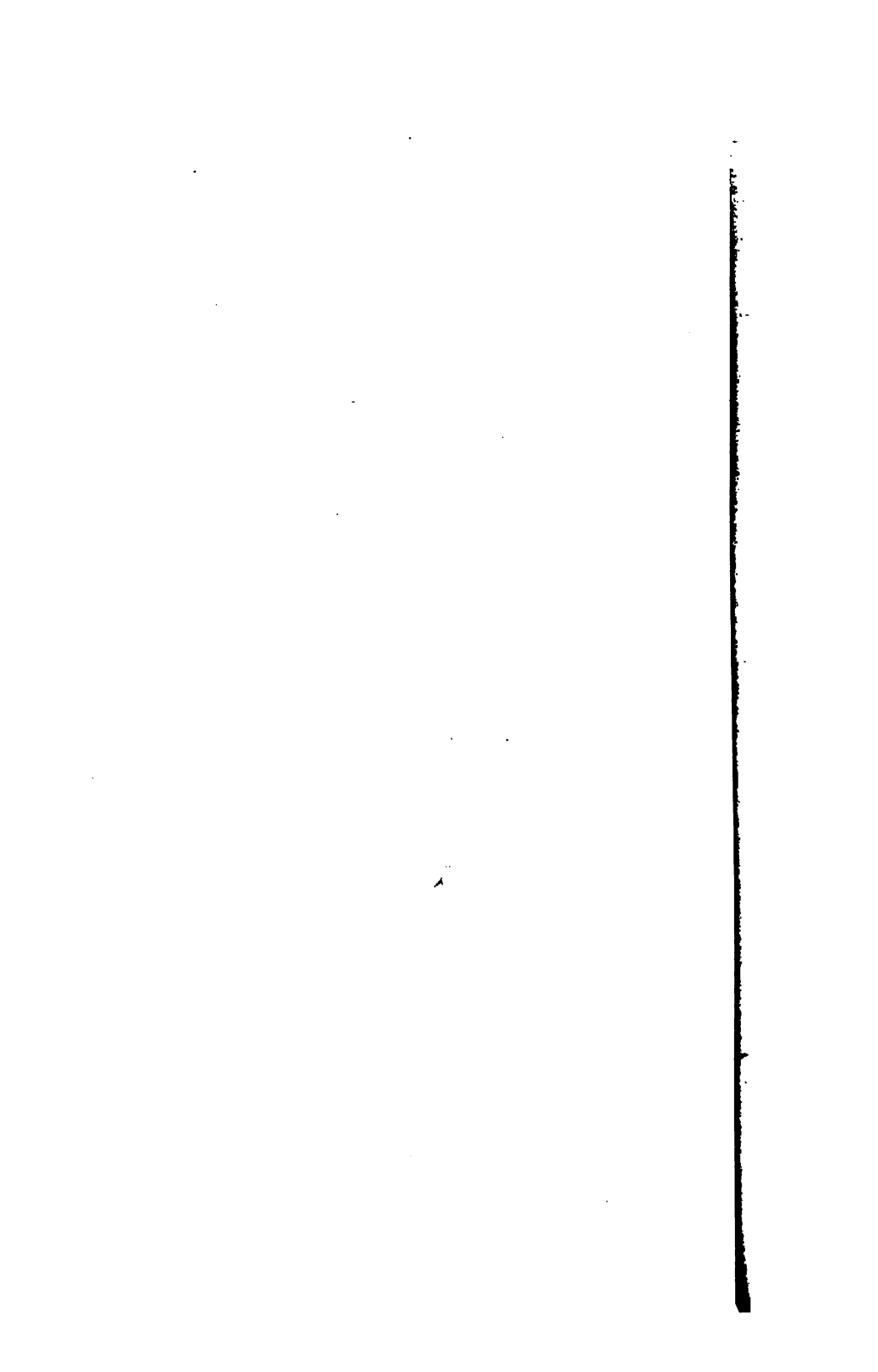
### THE WARREN, ITS FENCE, AND DESCRIPTION.

"Fast bind, fast find."—CHURCHILL, *"The Ghost,"* Book iv.

HAVING decided upon a situation for your warren, in which, if for shooting purposes, as much heather, fern, old gorse, or other cover should be included as possible, the first proceeding is, of course, to fence it; and here it is necessary to provide not only for preventing the rabbits inside from breaking out, but also against cattle, sheep, horses, or dogs breaking in. Any existing walls that may surround your boundary can be utilised beneficially in the manner before described by extending wire netting upon sticks towards the rabbits, from the top of the wall, keeping the supports in their places by means of sods and stones on top of all, and taking care to mortar up and render impassable any holes or breaks in the stonework. Still, however much walling or other natural assistance you may find to your hand, a large proportion of the fence will have to be of wire netting, the proper method of fixing which I now propose to describe.

Have, then, your posts cut to stand 4ft. out of the ground; make them of larch, or still better of oak, and be sure to char them well before fixing in the ground—they will last ever so much longer; the stouter they are the better, and round, or at least triangular, with the blunt side outermost. These posts should then be driven into the ground 4ft. apart, and a barbed wire run all round them, either on the top, or, better still, an inch or two below outside, so as to offer the firmest resistance to any animal pushing against it. At the height of 3ft. 6in. from the ground a black annealed wire should be stapled on to the posts on the outside, or that furthest from the rabbits; another 21in. from the ground; and yet another





quite close to the soil, underneath which latter the wire netting is to be turned in towards the inside of the warren, as shown in Fig. 1, of which this paragraph is a description. The wire netting should be laced on the topmost annealed wire, and should be 3ft. 6in. in height, and, again let me repeat, must be turned in along the surface of the ground underneath the lowest wire towards the rabbits. If this is done, strange though it may appear, not a rabbit will scratch out, while if you sink the wire netting into the ground after the usual fashion, escapes will be frequent, and a man's time pretty well taken up in blocking and repairing the holes where the rabbits scratch out. The grass and other herbage soon grows up through the turned-in wire, and forms a matted surface through or underneath which the rabbits will not attempt to scratch; bunny's habit being to go right up to any obstacle, and to commence to dig downwards until he gets underneath it, when under and out he pops. Of course he is constantly trying to play the same old game with this new sort of fencing; but, as he goes right up to the wire to begin, as soon as he commences his undermining operations he comes at the very first scratch to the turned-in wire, which is an effectual obstacle: and 6in. well turned in, and laid flat along the ground, is a sufficient obstacle, as it never, fortunately, comes into Mr. Coney's head to go back from the fence 8in. or 9in., and commence scratching *de novo*.

At first it was assumed that the fence above described would be sufficient to confine the rabbits, as even when they are playing about on a bank overhanging the fence they never dream of making a high jump, and so clearing the fence; but experience has unfortunately taught us that there is another awkward habit they learn by experience to be guarded against. They climb up just like cats. They do not do this for some time, but eventually it comes into their heads, and over they go like monkeys. Certainly, they also have often been seen to climb back again from the outside, but this cannot be calculated upon with any degree of certainty; so it becomes necessary to circumvent their wire-scaling propensi-

ties. This is done by again turning in the wire at the top of the fence, just the same as below. The wire is held in position by iron pins (Fig. 3) of about ten and a half inches long, driven into the posts to support the wire. These should not be driven in at right angles, but at obtuse, so as to frustrate the attempts which may be made by the rabbit to jump on to the flat surface presented by the wire if turned in straight; whereas, if presented to him with a more or less knife-like edge, he is not tempted to try, and yet the angle is quite sufficient to throw him down to the ground again when he attempts to climb up from below.



FIG. 3.

There still remains one great nuisance to be dealt with, and that is, to prevent the rabbits located without your warren from scratching in and making prisoners of themselves, which they have a great tendency to do; rabbits not being unfortunately of the same opinion as "Billy" Nichols' clients, in the time-honoured story told of him, when in his capacity of town councillor at Nottingham. He was orating against a proposal to incur the (to his idea) useless expense of erecting a new wall round the churchyard. "Them," quoth Billy, "as is in, can't get out, and we, gentlemen, as is out, surely don't want to get in."

This propensity, so far as I can see, is only to be effectually prevented by tying in and "turning out" another extra 6in. of wire in just the same way as the illustration shows it turned in.

The wire netting should be of 16-gauge, as being stronger and much more durable than the 17, which is most commonly used; and should be of  $1\frac{1}{4}$ in. mesh, or, better still, 1in. to make all quite safe; as it is wonderful through what very minute apertures the baby bunny will squeeze himself, and, when once out, he soon grows a bit or eats too much, and can't get back to his mammy inside. The wire netting lasts all the longer if well tarred before being used, and this precaution also, to some extent, prevents the outside rabbit from attempting, for some little time at least, to intrude.

So much for the fence. Now, to explain the use of the little, short posts, which will be remarked in Fig. 1 as standing away from the regular fence well in front of it, in fact, on the outside. These are most valuable in any parts of your warren exposed to the inquisitiveness of cattle, sheep, horses, or dogs. They are smaller posts, standing 1ft. above the surface of the ground, and 2ft. in front of the high fence. Another barbed wire, it will be perceived, runs along the top of these short posts, which are just of the right height to catch the knee of an animal proceeding to examine the permanent fence with a view to offensive operations; and when once any beast has had a taste of its quality, the low, inoffensive-looking fence is always avoided most carefully in future, thus saving the regular fence from much ill-usage in the shape of horning, rubbing, or other attacks. When first this low fence, No. 1, was put round the warren, hereafter to be referred to as No. 1, for the first week or so the barbs of its wire were covered all round with wool, hair, and other marks of warfare; but in a very short time all this ceased, and now no animal of any kind ever goes near it. Of course, this little extra precaution adds to the expense, but it is a wonderful safeguard. For those not caring to go to the cost, or having only sheep or dogs to contend against, fence No. 2 will be found cheaper and very effectual. In this the barbed wire is simply stapled on to the outside of the warren posts about one foot from the ground; the top barbed wire is also fixed to the outside of the posts, and the annealed wire and wire "netting" are fixed inside the posts, therefore allowing as much space as possible between the barbed wires and the netting they are put up to protect.

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## CHAPTER VI.

### THE COST OF THE WARREN FENCE.

"When we begin to build, we first survey the plot, then draw the model,  
Then must we rate the cost of the erection."

SHAKESPEARE, "*King Henry IV.*," Part II., Act i., Scene 3.

THE principal feature of this chapter, following up the description of a proper rabbit fence, is to present to my readers for examination what has been so often asked for in the *Field*—a cost sheet of an actual and existing warren. This may, for purposes of reference, be described as No. 1, being inclosed in its entirety by the fence shown as No. 1.

This warren, which was only inclosed last year, the fence not having been completely finished until April—a circumstance most disadvantageous to a good balance sheet—was originally an agricultural farm consisting of 40 acres of fairly light arable land, about 13 acres of covert, and (what was the chief inducement to turn it into rabbits) a small mountain adjoining of 85 acres in extent, which had been used for sheep, and was well covered with heather, gorse, and fern; a single pack of grouse having been in the habit for years past of breeding there annually. Fence No. 1 was run round it, and, owing to the lack of experience, two easily-preventible mistakes were at once fallen into. First, the wire netting was put on too large, being 1½ in. in the mesh; through this, as was alluded to before, the young rabbits pushed through in scores, necessitating the extra expense of running the inside of the fence round again all along the bottom, with an extra foot of 1 in. mesh wire netting, which has proved effectual.

Secondly, the habit, which rabbits acquire in confinement, of climbing up and over a wire fence was not foreseen, and an additional six inches, this time of the larger meshed netting,

had to be procured, tied on, and turned in from the top; all of which could have been avoided had a five feet width of netting been ordered in the first instance, and turned in at top and bottom. If any firm of wire workers could be persuaded to produce such an article of 16 gauge, with the mesh small at the bottom and gradually enlarging towards the top, it would be a great boon to intending rabbit preservers. This, as will be seen later on, has since been arranged for after communication with Messrs. Boulton and Paul, and the fact cannot be too strongly impressed upon intending rabbit preservers. The usual farm house and outbuildings were on this farm ready to hand, so not much expense was incurred on that point, beyond a few repairs to the house, and the fitting up of a portion of the buildings as a larder, with poles, to hang the dead rabbits upon. Other portions were fitted up with sitting boxes, &c., it being intended to breed turkeys, poultry, and ducks, which has been carried out with success, the man in charge (an ex-sergeant of the Scots Guards) working throughout the year a couple of Hearson's incubators and artificial mothers. Apple, pear, and plum trees have also been planted, and well-wired round, on the fields having the best soil and most southerly aspect; while a small stream which intersects the warren, and flows through some portions of marshy ground much frequented by snipe, has been dammed up in places, so as to form small pools; these have been planted round with alders and osiers, to attract wild duck and teal, so that no means have been neglected to form this warren into what it was intended for, "an Elysium for sportsmen."

The next proceeding was to pull down all the fences, and spread the stone walls inside the rabbit proof fence, not only to prevent the harbouring of vermin, but also to facilitate the process of laying out the rabbits for shooting, which would be impossible were these walls, into which they would bolt by hundreds, allowed to remain. Then the heather had to be burnt and cut with bill hooks into squares, with broad rides between to facilitate the shooting; and then the warren had

to be stocked with rabbits, there being hardly any previously existing upon the farm, the late tenant having had the privilege of killing rabbits long before the Ground Game Act was ever contemplated. This was done by setting quantities of wires in the woods adjoining, with knots tied in them so that the rabbits could not strangle themselves, but were caught alive and thrown over the fence. Live rabbits were also procured by advertisement and from friends at a distance, this being a most necessary proceeding in order to insure a thorough change of blood—a practice which ought to be repeated almost every year to insure success and the prevention of disease. I have every reason to believe that the double cross of wild rabbit with Belgian, which I am now breeding in large quantities upon the hutch system, will make in the future a most valuable cross for turning into warrens, as being likely to increase the size of the stock, and also to transmit to their descendants the valuable quality which this cross of rabbit has now been proved to possess, of enlarging in an appreciable manner the general size of the litters, which among purely wild rabbits is usually of the most meagre description. I seldom hear of more than four being produced at a birth, whereas, with the introduction of a slight touch of Belgian, from six to ten may confidently be expected.

This warren, as before remarked, was finished much too late in the season to give any very reliable data to go upon as to the quantity of rabbits to be expected from it in the course of an ordinary season. Had the fence been completed in January—two months earlier than it was—many more rabbits might have been relied upon, March being the great breeding month; and February and March, 1883, were (as have been the last two months in this year also) very dry, and most favourable to the breeding of rabbits. If my arithmetic fail me not, some interesting and instructive facts can be deducted from the accompanying “bill of costs.” Not claiming any of the qualities of a “chartered accountant,” I must apologise to my readers for the somewhat crude and unbusiness-like form in which they are presented, though

their absolute veracity may be relied upon; and care has been taken not to flatter either side, so to speak, nor to put too much or too little upon any single item.

The posts, which were cut from an adjoining larch plantation, were cut up by a movable steam-engine and circular saw-bench hired for the occasion, and were, after being charred and fixed into the ground, well painted over with black varnish, which appears in the balance-sheet to have been procured at a cost of 1*s.* 9*d.* per gallon; I believe it can be got cheaper. A mistake was made in using the three-ply twisted wire to strain the netting on, it being more expensive and not so suitable for the purpose as the black annealed wire shown in the folding plate. The wire, wire netting, tying wire, staples, iron straining posts, &c., were procured from Messrs Boulton and Paul, of Norwich—a well-known firm, which I am glad to take this opportunity of complimenting upon the excellence of all the materials supplied. The order was eventually placed in their hands after a severe competition with several other firms, so I think we may take it that the ironwork used was procured at a reasonable, if not extra-cheap rate.

A COPY OF BALANCE SHEET OF RABBIT WARREN No. 1  
FOR THE YEAR 1883.

RECEIPTS FROM STOCK SOLD.		Amount.
1883. Sold 400 couples at 2 <i>s.</i> 8 <i>d.</i> per couple .....		£53 6 8
Ditto 200 couple small ones at 1 <i>s.</i> 6 <i>d.</i> per couple .....		15 0 0
Total receipts .....		£68 6 8

EXPENDITURE.

I. Acreage	A.	R.	P.
(a) Of cover .....	13	0	0
(b) Of arable land .....	40	0	2
(c) Of heather, &c. ....	85	0	0
	<hr/>		
	138	0	2

II. Length of the fence in yards, 3371 yards.

Cost of fence a trifle over 2*s.* 4*d.* per yard, or 2*l.* 17*s.* 4*d.* per acre.

## III. Description of the fence.

- (a) Height of the fence is 4ft. high, and 1ft. on ground of netting.
- (b) The fence is made of three galvanised twisted wire No. 6, and of two barbed wire four-pointed thick set, one on top of the long posts, and another on short posts at about 1ft. distance from the netting; the nettings 16 gauge,  $1\frac{1}{2}$ in. mesh, and another netting 1in. in mesh 1ft. high is run all round the bottom of the fence so as to prevent the very small rabbits escaping.

- (a) 1. To 2022 wooden long posts at 4d. each,  
and 2022 short ones at  $1\frac{1}{2}$ d. each... £46 6 9

## IV. Cost of fence materials and labour, &amp;c.

2. To 12 iron straining posts at 18s. 9d. each .....	11 5 0
3. To 120,013yds. of twisted drawn wire No. 6, at 2l. per 10,000yds .....	24 5 5
4. To 6713yds. of barbed wire four- pointed thick-set, at 4l. 10s. per 1000yds .....	30 6 9
5. To 3371yds. of netting 16 gauge, $1\frac{1}{2}$ in. mesh, at $5\frac{1}{2}$ per yard.....	75 5 0
6. To 3371yds. of netting, 1ft. deep, and 1in. mesh, at 6l. 10s. 6d. per 1000yds.	21 19 11
7. To 20,000 fencing wire staples, 1in. mesh, at 2s. per 1000 .....	2 0 0
8. To 20,000 tying wire ditto .....	2 10 0
9. Extra quantity staples, tying wire, stretchers, and gratings, &c., includ- ing 192 gallons of black varnish at 1s. 9d. per gallon = 17l. 6s. 6d., carbolic acid, iron rivets, lead piping, hinges, nails, screws, &c.	34 14 4
	<hr/> £250 13 2
(b) 1. To wages of the men working at the fence .....	£124 2 0
2. To carting, &c., towards the fence...	10 0 0
3. To blacksmith sharpening and steeling .....	1 16 11
4. To hire of engine and wages of driver in charge of the engine, em- ployed in sawing posts for the warren.....	8 0 0
	<hr/> £143 18 11
Total cost of actual fence.....	394 12 1

V. Purchase of stock, 24 does at 1s. 6d. each, 305 ditto at 1s. 9d. each, and 83 bucks at 1s. 9d. ....	£35 15 0
VI. Feeding mangers or racks .....	5 5 0
	<hr/> £41 0 0

CAPITAL ACCOUNT.

Being total cost of making and fitting up .....	£435 12 1
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ANNUAL ACCOUNT.

VII. Yearly rent and rates and taxes, &c :	
1. Rent of the farm per annum .....	£60 0 0
2. The tithe rentcharge on the same .....	8 3 0
3. The income charge .....	1 5 0
4. The poor rates .....	6 15 0
	<hr/> £76 3 0
VIII. Keeper's yearly wages at 1l. per week .....	52 0 0
IX. Extra men burning drives, paraffining, ferreting, and preparing for the shooting .....	4 8 0
X. Keeper's yearly licence.....	2 0 0
	<hr/> £58 8 0
	<hr/> £134 11 0

Taking, then, the actual cost of the erection of the permanent fence, which should be reckoned as capital account, coming to 394*l.* 12*s.* 1*d.*, and charging 10 per cent. per annum on the same to allow for repair, wear and tear, &c.; and taking the annual expenses of rent, wages, &c., at 134*l.* 11*s.*, and allowing a sum of 5*l.* annually for beaters, the sum of 183*l.* would have to be realised each season by the sale of rabbits. Taking their selling price at 3*s.* per couple, this means 2440 rabbits annually, or seventeen and a fraction rabbits to the acre; that is, if eighteen rabbits could be killed to the acre, you would just clear expenses; if seventeen only, a slight loss would accrue. Whether or no this is possible, I cannot at present say for certain. Last year's produce was 1500 odd of all sorts and sizes, or nearly eleven rabbits to the acre; but then the loss of valuable time at the critical moment must be taken into account, and also the fact that, after being shot over once, no more does were killed—nothing but bucks, which were separated by being driven into a sort of a trap, fashioned with wire netting something after the pattern of a

pipe to a decoy. Into this the rabbits were all driven after the shooting, while the holes were still blocked and before they had time to reopen them—an excellent dodge for keeping down bucks, which consume a great quantity of food that had better be kept for does and young ones.

The total cost of the fencing comes out at 2*l.* 17*s.* 4*d.* per acre. This would, of course, be altered according to the shape of your ground, or a trifle over 2*s.* 4*d.* per yard. The rabbits are fed during hard weather in the winter on hay, supplied to them in little racks like those used for feeding sheep, only smaller and, of course, much nearer to the ground. They are made of wire netting, with a galvanised roof, and were also supplied by Messrs. Boulton and Paul from a rough sketch sent to them. Hay thrown upon the ground is wasted and trodden in, and turnips scour rabbits and should never be used.

Great care must be taken to keep down all vermin in a warren, as, from the quantity of stock, even one single stoat will do incalculable damage; but you have one great advantage, that poison can be used with impunity, and I do not believe that foxes care to jump the barbed wire fence, as none have ever been heard of inside this warren, though a large wood close by is a favourite haunt.

These figures will not, after careful consideration, commend themselves to would-be warreners; but I hope that some of the facts and wrinkles which I have been enabled, after plenty of practical experience, to present to your readers may prove useful to some at least of my fellow-sportsmen. There is, at all events, one argument in favour of shooting warrens which must not be overlooked. They are far cheaper than pheasant rearing; even if you lose some money over them, you do not lose very much; and, as to the other—well! I “could a tale unfold.” And another pull in favour of the warrens is that you can shoot them three or four times a year, and afford sport to several different parties of friends; for, carefully as you may block the holes and ferret out your rabbits, some few burrows are quite certain to be missed, into which the rabbits

cram by scores. Anyone putting his arm down can pull out plenty; and, what with misses, those that get back, and the rabbits which stuff into drains and under stones, &c., there are always plenty left for another excellent day's sport after the lapse of a few weeks. Still, as a monetary speculation, these artificial rabbit preserves cannot be recommended by any prudent man. Far better, to my mind, if you want to make money out of rabbits, is to have your warren in your own field, behind your own farmyard, where you can at all times regulate the animals' sustenance, and guard them from their enemies: Of course I refer to the hutch system, anent which let me offer, gleaned from that best, if somewhat hard-hearted teacher, dire experience, a couple more hints to intending rabbit farmers, from facts which have lately come under my own knowledge.

First, don't let the urgent, even piteous entreaties of inquisitive friends, persuade you to allow them to lift the lid and examine the nests of young rabbits before they are at least a week old; the old mother's temper won't stand it, and her maternal vengeance is unfortunately wreaked upon her innocent offspring.

Secondly, be careful to have the wire in front of the hutches made small enough in the mesh, or run a length of fine-meshed wire around the inside bottom of your hutches; otherwise, if the weather be fine, the old does will pull their young ones out for an airing in the sun—out go their little heads through the wire, their ears catch, and they cannot get back again; the consequence is, of course, strangulation. Talking of the wire-bottomed hutches, these are now improved by adding an iron framework to the bottom, which will prevent the wood from rotting from contact with the ground, and make them last ever so much longer, and this particular sort are patented by Major Morant; so in future the small royalty of one shilling upon each will have to be paid to him upon all those manufactured at the saw-mills in this neighbourhood or elsewhere—not a very heavy tax upon such a useful invention. It must also be thoroughly understood that the

right sort of rabbit, which has been sufficiently explained before, must be procured, and adhered to, to render "hutch farming in the open" a successful and pleasurable speculation, and not a disappointment. A description of another warren, surrounded by fence No. 2—which will, I think, show cheaper results than warren No. 1—will next be alluded to.

Although, of course, "shooting warrens" form the main subject of these pages, it may not be out of place to describe, for the benefit of those who may desire to utilise their warrens more for "profit than powder," *i.e.*, to market their rabbits trapped and not disfigured by being shot, in which state they of course fetch considerably more per couple from the dealers, the method by which the wily coney is entrapped by the hundred in Norfolk and elsewhere without the use of snares, traps, or any artificial appliances; nor are the services of a watcher required whilst the apparatus is at work.

Inclosures are made of stone, earth banks, or other material throughout the warren at proper distances from each other, about the size of sheep pens, with the walls sufficiently high to prevent the rabbits from jumping or climbing either in or out, the only entrance being by means of a small passage at one end; outside this aperture a pitfall is dug large enough and deep enough to contain, when required, perhaps a hundred rabbits; across this pitfall, leading right up to the narrow entrance to the large feeding pen, is hung a swing board arranged so as to drop when set by the mere weight of the rabbit crossing it, and balanced so as to right itself as soon as the unfortunate victim has dropped into the pit below and swelled the throng of his comrades already collected at the bottom. In the morning the warrener goes round these pitfalls and collects the catch, maybe turning out the does and only killing the bucks; the rabbits being perfectly uninjured by this method of capture, provided that the pitfalls are examined with sufficient frequency, and not allowed to get too full, which might end in the rabbits at the bottom—*i.e.*, those first caught—being killed by suffocation.

These traps are only set about once a week for a single

night, otherwise the board is kept taut by a pin, so that the rabbits can travel backwards and forwards into the large inclosed feeding pen with impunity. One or two in different parts of the warren are set every night throughout the season, so that there is always a catch going on somewhere, but not too often in the same trap. The rabbits are regularly fed in the larger inclosures, their food consisting of hay, chopped gorse, which is an excellent food for rabbits, if procurable in sufficient quantity, and occasionally a few turnips, all food, of whatever kind, being always placed in these feeding folds and nowhere else, so that the rabbits get to know them well, and run in and out of them with impunity until the day of reckoning comes, and the board which has so long served them as a secure conveyance to their dinners, suddenly collapses during their passage over it, and precipitates them, quite unhurt, into the cavity below.

Now to go back for an instant to the fence of the warren: A useful hint as to its protection may not be here out of place. The warrener goes, or should go, around the entire fence of the warren every morning, be it composed of wire, stone, earthen bank, or what not, and wherever he sees any tendency to attack any particular portion of the fencing with a view to exit, in fact where he perceives any scratching to have taken place during the night, he first blocks up and then puts on the scratch a piece of the paunch of a rabbit, and the remedy is most effectual—for a long while no further attempts to dig will be made at or near that place.

This hint will be found valuable to anyone desiring to induce rabbits to desert any particular spot, to drive them away from burrows in a shrubbery or pleasure ground, or to keep them off any particular plant or tree, &c. Rabbits cannot abide the smell of the paunch of their own species, and a piece of it placed in the entrance of every hole of a burrow which it is desired to force them to vacate will be found to have the desired effect, with but little trouble and no expense.

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## CHAPTER VII.

### WARRENS, AND THE DANGERS THEY ARE LIABLE TO.

"When sorrows come they come not single spies, but in battalions."

SHAKESPEARE, "*Hamlet*," Act iv., Scene 5.

BEFORE continuing the dissertation upon warrens, allow me to digress for a short space, and ventilate a theory which has come into my head as to a possibility of applying the open hutch system to—well, readers, don't laugh too much—to pheasants. Yes, it seems, if new-fangled, feasible, and I for one have tried it successfully. In the spring time of the year many, very many, sportsmen are occupied with their pens and aviaries of breeding pheasants. These are usually made of palings or wire running from 10 to 15 feet in height, and covered in with a netting at the top, remaining all the year upon the same stale ground, to sweeten which attempts are constantly made by the use of lime, salt, &c. Now, why not try a low movable pen, say 8ft. in length and breadth, boarded in upon two sides to afford shelter from the wind, with even a roof over one corner if you will, the rest to be composed of large meshed wire netting; no bottom, of course. Into this put your five or six hen pheasants and a cock, with their wings cut as usual, to prevent their hurting themselves against the top. Another board nailed all round, the exact height of the pheasants' heads, to prevent their seeing and being frightened by passing strangers, would be an advantage. Feed as usual, remove the eggs, and move the pen every other day, thus giving your birds fresh ground—that great essential—almost indefinitely. I believe the birds lay equally well, and the saving in expense must be great, as the large pheasantries—what with exposure to the wind, weather, &c.—con-

stantly require removing or renewing in some particular or other, and are a constant source of annoyance. These little low pens could easily be stored away for the summer, and not take up valuable space in a field, as the old-fashioned pheasantries so frequently do. There—I make a free gift of the notion, whatever it may be worth, to Major Morant, and he can add it to his patent for hutches if he pleases.

But now to our warrens again. One very fertile source of trouble, expense, and annoyance to the warrener we have been mercifully spared to a very great extent during the past two years. I allude to heavy falls of snow. This drifts, as we all know, and finally forms up against the fence and then freezes, frequently at a level with, or even above the top of our posts, affording the captives an easy road to travel. Of course Master Bunny takes instant advantage of this unexpected mode of exit, and out he goes, giving you all the trouble of catching him again, even if someone else does not do so—first.

The only way that I know of to obviate, or rather mitigate, this disaster is the expensive one of having a gang of men ready to dig at the conclusion of the snowstorm a trench around the inside of your warren fence, deep enough and wide enough to act as a sort of impromptu moat, and so prevent the rabbits from escaping. Luckily bunny has the decency to remain in his hole for twenty-four hours or more after the snow has fallen, before hunger invites him to experimentalise in the open, so he gives you a chance to frustrate his escape, provided you are prepared for instant action; and another advantage we score—he cannot travel in soft snow, and has to wait until it freezes and hardens.

It has been suggested that a fence for warrens composed of sheets of galvanised or corrugated iron, standing 4ft. high and nailed to posts 6ft. apart, with wire netting turned in according to my plan, might be effectual; and no doubt it would to the extent of preventing the rabbits from climbing up and escaping; but, in addition to the expense, all drifts of snow would lodge more compactly against such a fence than

would be the case with a wire one, through which some of the snow would certainly pass; and, again, the large area of wind-resisting surface would be fatal in a hurricane, or even half a one, and posts and iron sheeting would soon part company. A possibly efficacious fence might be, however, perhaps constructed from light thin galvanised pointed flat iron palings, tied together near the top and bottom by twisted copper wire, and strengthened at intervals by good stout posts, upon the principle of the pointed wooden lath fences to be seen so frequently along the railways in France, and around gardens, &c., in foreign countries. They are, though yielding, unclimbable, there being no foothold; and, if the upright, spear-like palings were fixed close enough together, rabbits could not push through them, and they could of course be prevented from scratching out by the usual method of attaching wire netting to the bottoms of the palings and turning it in. But I doubt this kind of fence being strong enough to stand the force of heavy snow, while against the attacks of cattle, &c., from the outside, it would require as much protection as a wire netting fence would; and as to the cost of such a fence I can give no idea. However, an illustration is given for the benefit of such as may fancy the notion (for which see page 55).

Let me once more, before proceeding to describe warren No. 2, again reiterate, for the benefit of any owners or intending owners of fenced-in rabbit preserves, the absolute necessity of frequent changes of blood for the benefit of their stock. This cannot be done too often or too much, and should not be difficult. Live rabbits are even now easily procurable by advertisement or otherwise, and, in a large warren, I should not think a change of a hundred couples per annum too much to advocate.

But now it is high time to get on with the description of the warren, which is fenced in with the cheaper kind of fence as shown in illustration No. 2 in the *Field* of April 12.

The ground inclosed is lightish land, situated on the summit of a tolerably high hill—in fact, the entire mountain may be

said to be fenced for rabbits. There is but very little arable land inside the fence, though a couple of tolerably large hay fields are reserved for the use of the rabbits outside the warren, and fenced against sheep, &c., in readiness to be cut and harvested, and stored for their feed in the winter. A large portion of the ground is moorland, on which from six to ten packs of grouse have been in the habit of nesting annually. Whether they will desert their ancient habitat now that the young heather will fall a prey to the army of involuntary invaders, remains to be seen. A goodly proportion of the rest of the warren consists of thick fegg, or rough grass, and some swamps and rushes, the largest piece of which latter has been planted with alders and bitter osiers, in hopes that the rabbits will spare them; if they do, a good covert will be formed to attract woodcock, &c., in due season. At one end of the warren is, what we call in Wales, a "freith," or mountain inclosure, of about 60 acres, which was once planted with larch, spruce, &c., but which, thanks to careless planting, to the inroads of hares and rabbits, and to its bleak and exposed situation, has turned out a failure, though in one corner a few acres of trees have struggled into a precarious existence; and these, with the rough grass, fern, and gorse which have sprung up, will form most excellent covert for shooting the rabbits in, the intention being to drive them, if possible, from the remoter parts of the warren into this particular sanctuary when the day of execution arrives. The drawback to this rabbit preserve is that there is a public bye-road running straight through the middle, where the warren is about a quarter of a mile wide. This, though not very much used, is a nuisance, as every farmer riding or driving his cart through has his trusty "bow-bow" in attendance; and it is too much to expect, from even canine self-abnegation, a temperate and reserved demeanour when "Mr. Colley" finds himself, all of a sudden, in the midst of swarms of what he considers at home his natural prey. However, this drawback is obviated as much as possible by a stiff fence on each side of the road, composed mostly of barbed

wires, put pretty thick, and a good heavy swing gate guards either end, which closes of itself, and is well wire-netted down close to the ground. The wiring-in and stocking of this warren was finished in good time, *i.e.*, before the end of last January, and the analysis of the accompanying bill of costs may be shortly and roughly summed up as follows, leaving out fractions and such-like abominations: Cost per acre, taking the extent at 308 full acres, a trifle less than 1*l.* 9*s.*; cost per yard of fencing, 1*s.* 9*d.* Capital account on which 10 per cent. is to be charged annually, 486*l.* 2*s.* 10*d.*, interest, 48*l.* 12*s.* 3*d.* This, added annually to necessary outgoings for rent, wages, taxes, &c.—coming to 117*l.* 13*s.* 4*d.*—makes it necessary to acquire 166*l.* 5*s.* 7*d.* per annum to be square; which means that, selling at 3*s.* per couple, you must kill 2217 rabbits in each year, or a little over seven rabbits to each acre. This should not be difficult, so, as I anticipated, the figures relating to warren No. 2 come out much more satisfactorily than those of No. 1 given before. This is easily accounted for, the rent being much less, the fencing done cheaper owing to experience, the omission of the small posts two feet away from the fence, the lower barbed wire being in this warren nailed to the outside of the actual standards, and the use of black annealed wire at 10*l.* a ton, instead of twisted wire at 16*l.*; labour, sawing, carting, &c., all were cheaper done; and, with the excessively favourable season that we have been presented with for rabbit breeding in this year of grace 1884, the prospects of this warren look fair enough from a pecuniary point of view. As to its capabilities for affording sport, they have not yet, of course, been tested, so it is no use hazarding any conjectures on this point until practical experience—next October—comes to our aid. It will be noticed that the item of say 30*l.*, for the black varnish, which has not yet been applied to the posts, has not been included; neither has the expense to be allowed for beaters and stopping out the rabbits—all to be added on.

I propose to offer, in conclusion, a few remarks on the way the laying out of the rabbits and the beating of the warren,

already referred to as No. 1, has been hitherto conducted; but would remark that in all new warrens, such as the one here described, it might be advisable to turn in for the first season an extra quantity of strong old bucks, to do the digging in the first instance; in fact, to act as "clerks of the works," there being, of course, very few "furnished apartments," in the shape of ready-made burrows, to let at first; and the time of the "mothers of the Gracchi"—to wit, the old does—should be more profitably utilized in attending to their maternal obligations. But as rabbits in a wild state commonly have consecutive litters within five weeks one of the other—*i.e.*, three days after a rabbit has kindled she is again in the family way—and as rabbits naturally breed much faster in a new warren where the ground is fresh and free from taint, you will not be long, provided the first season is dry and favourable, in getting your stock up.

The Scriptures tell us that the "conies" are a feeble folk; but our antipodean cousins in Australia would dissent from this statement—they have proved too strong for the aborigines out there at all events.

A great source of annoyance in all new warrens will also be found in the habit which rabbits—in a manner following out the aggravating propensity which pheasants always show to nest by the side of a lane, footpath, or other situation most open to the attention of the passing dog or human—have of making their scrapes in any old roadway, drain, or other place most liable to be flooded out by the first passing storm. This malconception on their part should be most carefully guarded against, and the incipient nests ruthlessly blocked out in such dangerous situations.

#### THE RABBIT WARREN No. 2.

I. Acreage:	A.	R.	P.
(a) Of cover .....	79	0	2
(b) Of arable land.....	71	2	12
(c) Of heather, &c.....	157	1	14
	307	3	28
II. Length of fence.....	5093 yards long.		

**III. Description of fence :**

- (a) Height of the fence is 3ft. 6in., and 6in. turned on ground, also 6in. rim on top to prevent rabbits climbing over, of netting; the 4ft. wide being 17 gauge and 1½in. mesh, and the rim of 17 gauge, 1½in. mesh.
- (b) the fence is made of two rounds of plain drawn annealed wire No. 6, also one round of thick tying wire to hold the rim net, and of two rounds of barbed steel wire, four-pointed.
- (c) Wooden posts at about 5ft. apart, and strong straining posts at 100 yards apart.

**IV. Cost of fence :****(a) Materials :**

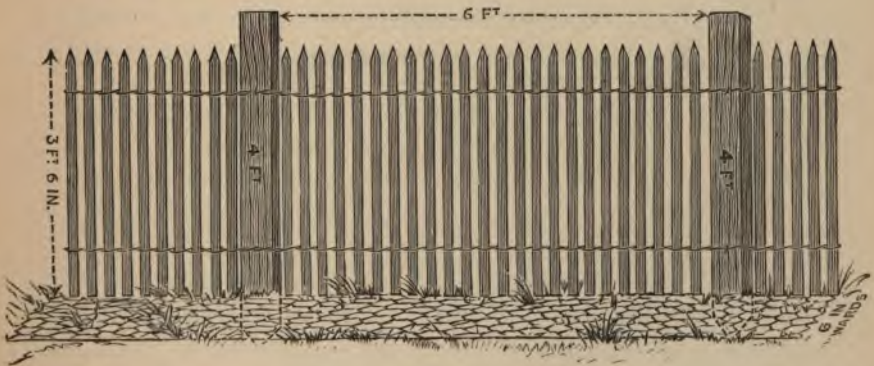
1. To about 3056 wooden fencing posts at 4d. each .....	£50	18	8
2. To about 50 strong wooden straining posts at 3s. each .....	7	10	0
3. To about 39cwt. of plain drawn annealed wire at 10s. per cwt....	19	10	0
4. To about 10,186 yds. of barbed steel wire at 90s. per 1000 yds.	45	16	6
5. To about 5093 yds. of netting, 4ft. wide, 17 gauge, 1½in. mesh, at 6d. per yard .....	127	6	6
6. To about 5093 yds. of netting for rim, 6in. wide, 17 gauge, 1½in. mesh, at 1½d. per yard .....	37	2	8
7. To about 12,224 staples at 2s. per 1000 .....	1	5	0
8. To tying wire ditto .....	4	0	0
9. To about 3100 stays to hold the rim at 2s. per 100.....	3	2	0
10. To black varnish to dip the net in .....	3	8	0
11. To bill for coal used for sawing posts .....	2	10	0
12. To smith's bill for iron trimmings for gates, &c.....	1	10	0
	<hr/>		
	£303	19	4

**(b) Labour :**

To wages of the men fencing, day work and piece work, including hire of engine and saw bench to saw up posts .....	£120	3	6
To carting for the fence .....	20	0	0
	<hr/>		
	£140	3	6

V. Feeding mangers or racks, &c. ....	£5	5	0		
VI. Purchase of stock, 400 does at 1s. 6d. and ninety bucks at 1s. 6d. each .....	36	15	0		
				42	0 0
Cost of making and fitting up .....	£486	2	10		
VII. Yearly rent of land, rates and taxes, &c. :					
(a) Rent of land per annum .....	£50	0	0		
(b) Tithe on land, about.....	7	0	0		
(c) Income tax, &c., about.....	1	0	10		
(d) Poor rates, &c., about .....	5	12	6		
				£63	13 4
VIII. Keeper's wages at £1 per week.....	£52	0	0		
IX. Keeper's licence .....	2	0	0		
				54	0 0
Cost of maintaining .....	£117	13	4		

The posts, as before remarked, are not yet painted with black varnish, which will entail a further expense, and when saying that so many rabbits must be killed to the acre in both these warrens, I have not taken into account any cost for their food, as a sufficiency of land to find them in



hay has been included in the acreage given and estimate, the harvesting of which should be done almost entirely by the warrener.

The fence which this illustration represents is described on page 50.

In answer to several inquiries, I may as well again state that the barbed wire used in both the warrens described was procured from Messrs. Boulton and Paul, of Norwich, though I thought I had made that point clear, even at the risk of being accused of unduly advertising particular tradesmen.

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## CHAPTER VIII.

### PRINCIPALLY TREATING OF THE SHOOTING OF THE RABBIT.

"But this denoted a foregone conclusion."

SHAKESPERE, "*Othello*," Act iii., Scene 3.

"'Tis as easy as lying."

SHAKESPERE, "*Hamlet*," Act iii., Scene 2.

FROM the number of letters of inquiry that I have received from the public anent the prices and other particulars of the two different sorts of rabbit-proof fencing suggested in previous pages—I allude, of course, to the sheet iron or galvanised fence, and the 5ft. in height continuous wire netting, composed of three different sizes of mesh—these are evidently points which awake interest in many of your readers, I have considered it desirable to procure and publish an estimate of both for the general benefit; so here they are.

Galvanised corrugated iron, unclimbable fencing, with spiked edging to prevent being climbed. Prices to include sufficient nails and washers for fixing to wooden framework per foot lineal. Gauge No. 26, 3ft. high, 1s. 4½d.; 3ft. 6in., 1s. 7d.; 4ft., 1s. 9½d.; and so on, increasing in price, as you arrive at gauge 18, to 2s. 6d. a foot for fencing 3ft. high, and so on in proportion. I have only given the heights that would be required for a rabbit fence, though I am informed that this fencing is made up to 10ft.; and a most excellent fence it looks too, on paper; but I have still my doubts as to its wind-resisting properties and economy.

I also append for general information three estimates for a thousand yards of wire netting from Messrs. Boulton and Paul, of Norwich. No. 1 is for the different sizes of mesh woven in one piece, suggested by me as a desirable fence for

rabbit warrens; No. 2, their own suggestion, for the same; and No. 3 the actual wire netting as described as having been used for warren No. 2. An inch and a quarter mesh ought to be small enough to restrain the tiniest of rabbits, but I can't help thinking that a one-inch mesh, while you are about it, costs very little more, and would remove all doubts.

No. 1, which I strongly recommend,—

1000 yards galvanised wire netting, mixed mesh, 5ft. wide.

12in. by 1½in. by 17in. ....	}	£30 12 6
12in. by 1in. by 17in. ....		
12in. by 1½in. by 17in. ....		
24in. by 2in. by 17in. ....		
Lacing above widths .....		2 5 0

An estimate for mixed mesh wire netting

as previously suggested ..... £32 17 6

No. 2:

1000 yards galvanised wire netting, mixed mesh, 5ft. wide.

36in. by 1½in. by 17in. ....	}	29 5 0
24in. by 2in. by 17in. ....		
Lacing .....		0 15 0

£30 0 0

No. 3:

Messrs. Boulton and Paul's own suggestion.

1000 yards galvanised wire netting, 5ft. by

1½in. by 17in. .... £33 10 0

As described in the *Field*.

Amongst the many hints, suggestions, and estimates which have been forwarded to me by various parties, interested or otherwise, since my articles in the *Field* were commenced, there is one which strikes me as being of such possible value to any person wishing to set up a lot of wire netting for any purpose, in a case where wooden posts are not available, or are difficult or expensive to procure, that I cannot but reproduce it. I allude to the patent angle standards fitted all ready for attaching wire netting to, supplied by E. S. Hernulewicz, 47, Moorgate-street. These are driven into the ground from 12in. to 18in. deep, and then the netting is attached at the selvages top and bottom by patent hooks

and nuts, so that it (the netting) can be at any time removed if desirable. The prices for the most useful heights for rabbit fencing are, including galvanised hooks and nuts to each standard to attach the wire netting with, 3ft. high, 7½d. each, and 4ft. 8½d., black varnished. This is certainly a useful invention; and if the larch disease, so prevalent in this country, continues its present ravages without diminution, something of the sort will become a necessity, as oak posts are not always procurable upon the spot where wanted.

Now having, I think, given as far as lies in my power a pretty full list of all the requisites for starting a warren, and hints for applying them according to my own notions, which are of course anything but infallible, it may not be out of place to add a few remarks on the preparation of the warren for shooting, and a description of the beating; though, of course, different warrens require different treatment—as where, for instance, the rabbits are let into the actual shooting ground for their feed through “smootches” or holes in walls, when all that is required is to let down the trap doors on a favourable night when the wind is blowing from the rabbits to the keepers, so that without detection they can get behind their quarry, block them out, or set nets as desired.

It is very desirable when setting nets for rabbit shooting, when it is at all possible for shots to be fired at rabbits close to the nets, to use wire-netting instead of string; as it is astonishing what very large holes a very few shots will make in the latter, and the former is almost as easily manipulated; in any case stops (poor fellows!) outside the net are desirable if a big bag is required, as rabbits will climb over wire, and, more often than can be believed, get through cord.

Well, we will suppose it is about ten days or a fortnight before the day fixed for a shooting party, and it is proposed to lay out the whole warren so as to make a long day of it. Three or four parties of men, two in each, proceed with ferrets to bolt the rabbits in the usual way, taking care, as each earth is finished, to block each hole separately with stones and earth, and to give the blocking a good watering

from a can of paraffin. This is a settler for the rabbits; they won't try to scratch in again for a long time; but, if rain comes, or the time is very prolonged before the appointed day arrives for shooting the warren, a second application is easy and effectual. This ferreting and blocking should be done as much as possible in regular lines, the parties keeping as much abreast of each other as is convenient, and it is a good plan to run a stop net each night, stretching from side fence to side fence, between the stopped and the undoctored holes. Should time be of importance, or for any other reason it is not convenient to block all the rabbit burrows, the running of a ferret through them whose coat has been well saturated with oil of tar will be found very effectual.

When the middle of the ground has been reached, let the men begin exactly at the opposite end to where they commenced, so as to drive the rabbits back over the already blocked-up holes; this saves time. When every hole that can be found has been so treated, nothing more remains to be done except to scatter any loose walls that can be so treated; poke the rabbits out from rocks with crevices underneath them, and block these latter where practicable, and see to the fences, if there are any; and, most important of all, watch the rabbits, while above ground in this defenceless condition, with a good strong gang of trustworthy retainers every night before the shooting—and after it, too—until they have had time to scratch in again. A few alarm guns, and other devices which I do not care to particularise, are also desirable at this period. But we will suppose that no accident has occurred; the long-expected morning has arrived; and now the Ground Game Act is going to be enacted wholesale. Have plenty of beaters, and as few boys as possible. If you must have some of the latter, put a man between each. As a wily old keeper in the north once remarked to me, "Boys don't pay, sir; you pays them, and you has to pay a man after all to look after each paid boy." Besides, I have always remarked that, the smaller the boy, the more the rabbits are foisted on to him, till lag behind he must, however willing.

Arm each of your "supers" with a good stout stick, not too long, and let the officer in command issue in general orders a strict injunction to "poke," not "hit" or "beat," with these weapons whenever practicable. A rabbit very often will not move for a soft tap, and he sits so tight occasionally that a hard one will settle him before the gun comes into action. A nice insinuating little prod anywhere that an aperture is discerned in amongst the fern or heather sends him out full tilt; and, unless the line is very well dressed and very close together, he is as likely as not to get back, as he always *starts* in the direction in which his head happens to be when he first feels the presence of the invader. Of course, in beating a wood with but little undercover, bare fields, &c., which has occasionally to be done to put the bulk of the rabbits into the actual thick-lying ground, "open order" is more allowable; but when the heather, or whatever may be the *pièce de résistance*, is once reached, "shoulder to shoulder" and almost "leg to leg" is not too much to insist upon, as it is astonishing, till witnessed, how rabbits *will* go through a line of men, whatever you may do; and shouts and kicks, unless fatal, they treat with a sublime indifference most aggravating to the head keeper, if once he lets his line get a little loose.

Have a keeper at each end of the company of beaters to keep the line and the dressing, and no retrievers, unless perhaps the one that follows the warrener himself, and who is probably on bowing acquaintance with most of the "gentlemen in fur coats" that he will pay his last respects to when laid out in long line at the close of the day's work. The best of retrievers are out of place at this job; they get trodden upon, and, if they bolt the least bit back after a wounded rabbit, they run an extremely good chance of being peppered.

Your guns, of course, walk in line as much as possible with the beaters, not a trifle ahead of them, as in covert shooting; otherwise there is a gap. This bunny at once makes for, and is too close to shoot: and, *à propos* of the guns, see that they are all provided with cartridges lightly loaded expressly for this work. You need never fire a random or long shot. If

there are plenty of rabbits, you get more to do than you care about, and a heavy charge with such a lot of shooting soon begins to tell upon the shoulder, and gives you, oh! "such a head" next day, to say nothing about spoiling the stuff for the market.  $2\frac{1}{2}$  drs. of black powder, or its equivalent in "Schultze," which is far preferable, and  $\frac{3}{4}$  oz. of shot is ample, and will roll over a rabbit most efficiently at twenty yards, which is quite as far as you will want to loose off at on a big rabbit day. Turner, of Reading, makes a capital wood powder rabbit cartridge, in blue cases, which I see used by a large proportion of shooters at this work.

When wheeling or beating round the angles or corners of your warren, if your guns are trustworthy—and why have them out if they are not?—it is an excellent plan to order all to shoot only forward except one, or one at each end of the line, who walk behind for a space, and take the rabbits which at this particular epoch are more likely, after the manner of a defeated Ascot plunger, to try the "getting back" stakes, than when the ordinary straightforward course is being pursued. At the end of each or nearly every beat should be erected a triple line of low gallows, composed of a long pole, supported by a couple of forked ditto, and a ready-dug pit alongside, presided over by some veteran keeper, or old labourer superannuated (though he would not perhaps quite approve of this estimate of his qualities), of sporting tastes—of which class there are always, somehow, plenty of specimens handy—who, after the dead rabbits have been counted and flung to him in a heap, performs their last toilette, and hangs them in couples—united, as to the hinder anatomy of their persons, across the sticks of the aforesaid open-air larder, whilst you and the line are off on the next excursion. And so, and so, with no interval, save that for lunch—graced, perchance, by fairer presences and a relief from "shop"—goes on the sport until the day draws to a close, the light is waning, and the last beat done. Then comes the time for the man "with the book," neglected before, or looked upon as a useless encumbrance, "preventing us getting on, sir." He now

all at once becomes the object of breathless attention. What's the total? resounds on all sides, to the utter discomfiture of that luckless individual, who is wrestling his mightiest with rows of evil-looking figures, written perchance with a patent copying pencil in a shower of rain.

Then comes the inspection of the long line, or, let us hope, double or triple line of victims, laid out on the flat, if such can be found—not easy in Wales, at all events—heads one way, scuts the other; nothing to break the monotony except, it may be, now and then the little touch of red denoting the not very remote ancestry of some “hutchy” scion. Anent this, the word reminds me—pardon, reader, a slight digression—an entirely novel *raison d'être* was offered to me at the late Shrewsbury Field Trials, by a sportsman from Ireland, who suggested borrowing a couple of my half tame, half wild rabbits for the purpose of taking home, to become the medium of breaking his young setters from fur, flock, and snakes—these being, according to his account, about equally plentiful at the present day in the sister isle. This notion, together with his ingenious device for overcoming the absence also (believe me) of winged game in the district from which he hails, was too much for my gravity; but I dared not, indeed, submit the latter to the discerning eyes of the Editor of so matter-of-fact a paper as the *Field*. He had no dogs, unfortunately, broken upon these premises, which, though novel, may be perhaps “Better than nothing at all.” The monotony of bad scent, no covert, and indifferent performances at these trials might have been gratefully relieved; though why, as he had no game, winged or four-footed, according to his own showing, to shoot at, he wanted dogs at all was a question the answer to which I never quite arrived at. But we must hark back to our *moutons*, no, “lapins.” A dreary show, in truth, is the displayed proceeds of a day's rabbit worrying. How different to the varied line at the end of a covert, where the woodcock, “gros lôt” in the wheel of fortune of sport, heads the list, disentangled with pride from the innermost depths of the pockets of the lucky slayer, who, all

*expectant* of the half-crown lottery next morning (someone is sure to be off by the early train—"so sorry, my dear fellow, I quite forgot to 'part'!"), is loath to quit his prize, denuded though it already be of the "artist's feathers"—and, if the slayer be anything of a gourmet, of the sinews of the thighs as well. Then the jolly old brown hare—visions of currant jelly—Cross, well not "black," but "red," before one's anteprandial vision; and his ear! oh, his ear! the wily old trout, so often ensnared by a hare's "lug," has my most respectful sympathy; again, the bright cock pheasant, ring-necked or old English; and last, but unfortunately not least, that long, unbroken line of dull brown heads and tails along which "our only general," the irate head keeper, keeps poking with unrelenting *baton* whilst gruffly accosting his unhappy guns with, "Well, you has been adown upon they hens again this time, and no mistake, gentlemen!" Erstwhile the "Simon Pure"—the real originator of all our sport, the unfortunate "man on the beat," recipient of little *kudos* and less coin—stands gloomily in the distance, with as much of the "Alone-I-did-it" look about his eye as is compatible with his awe for the grim presence in his front; and is already wondering how many eggs "the guv'nor" is going to allow him next year to make up for all this carnage.

But a truce to frivolity. Casting one more somewhat astonished glance at the long lines of neatly displayed victims at our feet—rabbits *do* mount up, *surely*!—we are recalled again to consciousness by the dulcet tones of some one of the ladies, who perchance have come to "fetch us home," exclaiming, "What, you don't mean to say you have killed all those poor little rabbits in one day? *Brutes*!" And, hastily donning the latest from Ulster House, we jump into the break, and so home to our billiards or rubber of whist—replaced, it must be confessed, sometimes nowadays by smart smoking jackets and five o'clock tea—utterly oblivious of all the trouble, worry, forethought, expense, calculation, and bother, which have been expended by all parties concerned, before a really successful day in a "Sporting Warren" can be brought

to a close ; and to the necessary preliminaries from first to last which I have with more or—as I fear—less lucidity endeavoured to explain in—to use the cruelly crushing stock phrase, supposed to be so efficient when addressing to some paper a letter, about the grammar and insertion of which you feel more than doubtful—that widely circulated journal the “Country Gentleman’s Newspaper.”

P.S.—The gist of everything is in the postscript, you know. I cannot, I think, better conclude these remarks anent bunny than by serving up, as a last course, an excellent recipe for cooking the larger sorts, doubtless equally efficacious with the smaller or wild, confided to me—“authority is everything in these matters”—by a tonsorial artist at Mr. Tatam’s, in Jermyn-street, during the intervals of a “shampoo,” and an attempt to acquire the London style, or at least as much of it as is attainable by such a confirmed country chawbacon as your humble servant. Should “The Major” not have left town, let me recommend him to make the acquaintance of this gentleman, whose knowledge of rabbits is only slightly inferior to his acquaintance with horse-racing. And so, begging in the first place most humbly to apologise to Mrs. Glasse for presuming to displace from its time-honoured niche her historical hare, in favour of a mischievous piece of furry vermin, I say “First catch your rabbit.” This, if you have already adopted the hutch system, will not be a matter of much difficulty, then,—*thus* him :

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And again, let me add one more hint for the benefit of any rabbit breeders who may be troubled by rats either in their hutches or warrens, *i.e.*, that a simple, cheap, and efficient rat poison is easily concocted by putting about in their haunts

small pieces of sponge soaked in honey and baked in an oven—*verb. sap.*

And now before finally committing this brief brochure upon bunny to its paper cover, I must add one final word to thank those that have been kind enough to wade through its pages, and to express a hope that, though the “cotton tail” is not at the best of times an amusing subject to work upon—in fact, until he appears in conjunction with gravy and bread sauce in the last act of his little drama, he may, without calumny, be looked upon as “dry”—I may escape, from their lips at all events, the final remark of Hotspur to Mortimer (*see* King Henry IV., Part I., Act iii.),

O, he's as tedious  
As a tired horse;

but may venture to hope for a more favourable verdict from the many who have evinced such keen interest in the coney, and the best method of rearing him, should they happily have acquired from the perusal of these pages any useful hints or information, in the words used by Dobson in his life of Petrarch:

The end of doubt is the beginning of repose.

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FINIS.

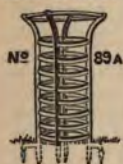
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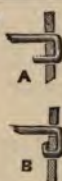
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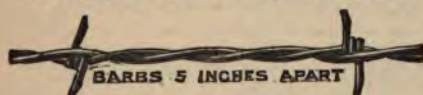
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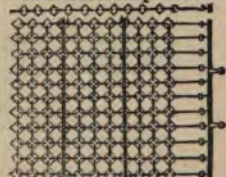
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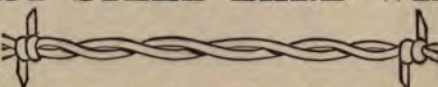
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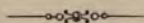
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